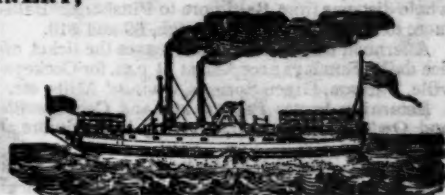


# AMERICAN RAILROAD JOURNAL, AND GENERAL ADVERTISER

FOR RAILROADS, CANALS, STEAMBOATS, MACHINERY,  
AND MINES.



ESTABLISHED 1831.



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SECOND QUARTO SERIES, VOL. II., No. 18.]

SATURDAY, MAY 2, 1846.

[WHOLE No. 514, VOL. XIX.

## BOSTON AND PROVIDENCE RAILROAD. Passenger Notice. Summer Arrangement. On and after Monday, April 6, 1846, the Pas-

senger Trains will run as follows:

For New York—Night Line, via Stonington. Leaves Boston every day, but Sunday, at 5 p.m.

Accommodation Trains, leave Boston at 7½ a.m. and 4 p.m., and Providence at 8 a.m. and 4½ p.m.

Dedham trains, leave Boston at 8 a.m. 12½ m., 3½ p.m., and 6½ p.m. Leave Dedham at 7 a.m. and 9½ a.m. and 2½ and 5½ p.m.

Stoughton trains, leave Boston at 11½ a.m. and 5½ p.m. Leave Stoughton at 7-20 a.m. and 3½ p.m. All baggage at the risk of the owners thereof.

31 ly W. RAYMOND LEE, Sup't.

BRANCH RAILROAD AND STAGES Connecting with the Boston and Providence Railroad.

Stages connect with the Accommodation trains at the Foxboro' Station, to and from Woonsocket. At the Seekonk Station, to and from Lonsdale, R. I. via Pawtucket. At the Sharon Station, to and from Walpole, Mass. And at Dedham Village Station, to and from Medford, via Medway, Mass. At Providence, to and from Bristol, via Warren, R. I.—Taunton, New Bedford and Fall River cars run in connection with the accommodation trains.

## NORWICH AND WORCESTER RAILROAD. Summer Arrangement, commencing Monday, April 6, 1846.

Accommodation Trains, daily, except Sunday. Leave Norwich, at 6 a.m., and 4 p.m. Leave Worcester, at 10 a.m., and 4½ p.m.

The morning Accommodation Trains from Norwich, and from Worcester, connect with the trains of the Boston, and Worcester and Western railroads each way.

The Evening Accommodation Train from Worcester connects with the 1½ p.m. train from Boston.

New York Train via Long Island Railroad: Leave Allyn's Point for Boston, about 1 p.m., daily, except Sunday.

Leave Worcester for New York, about 10 a.m., stopping at Webster, Danielsonville, and Norwich.

New York Train via Steamboat—Leave Norwich for Boston, every morning, except Monday, on the arrival of the steamboat from New York, stopping at Norwich and Danielsonville.

Leave Worcester for New York, upon the arrival of the train from Boston, at about 4½ p.m., daily, except Sunday, stopping at Webster, Danielsonville and Norwich.

Freight Trains daily each way, except Sunday.—Special contracts will be made for cargoes, or large quantities of freight, on application to the superintendent.

Fares are Less when paid for Tickets than when paid in the Cars. 32 ly J. W. STOWELL, Sup't.

## BOSTON AND MAINE RAILROAD. Upper Route, Boston to Portland via, Reading;

Andover, Haverhill, Exeter, Dover, Great Falls, South & North Berwick, Wells, Kennebunk and Saco.

Summer Arrangement, 1846.

On and after April 13, 1846, Passenger Trains will leave daily, (Sundays excepted,) as follows:

Boston for Portland at 7½ a.m. and 2½ p.m.

Boston for Great Falls at 7½ a.m., 2½ and 4½ p.m.

Boston for Haverhill at 7½ and 11½ a.m., 2½, 4½ and 6 p.m.

Boston for Reading at 7½, 9, and 11½ a.m., 2½, 4½, 6 and 8 p.m.

Portland for Boston at 7½ a.m., and 3 p.m.

Great Falls for Boston at 6½ and 9½ a.m., and 4½ p.m.

Haverhill for Boston at 6½, 8½, and 11 a.m., and 4 and 6½ p.m.

Reading for Boston at 6½, 7½ and 9½ a.m., 12 m., 1½, 5 and 7½ p.m.

The Depot in Boston is on Haymarket Square.

Passengers are not allowed to carry Baggage above \$50 in value, and that personal Baggage, unless notice is given, and an extra amount paid, at the rate of the price of a Ticket for every \$500 additional value.

CHAS. MINOT, Sup't.

## GEORGIA RAILROAD. FROM AUGUSTA TO ATLANTA—171 MILES. AND WESTERN AND ATLANTIC RAILROAD FROM ATLANTA TO OOTHICALOGA, 80 MILES.

This Road in connection with the South Carolina Railroad and Western and Atlantic Railroad now forms a continuous line, 388 miles in length, from Charleston to Oothicaloga on the Oostenanla River, in Cass Co., Georgia.

Rates of Freight, and Passage from Augusta to Oothicaloga.

On Boxes of Hats, Bonnets, and Furniture per foot.....16 cts.

" Dry goods, shoes, saddlery, drugs, etc., per 100 lbs.....95 "

" Sugar, coffee, iron, hardware, etc.....65 "

" Flour, bacon, mill machinery, grindstones, etc.....33½ "

" Molasses, per hogshead \$9-50; salt per bus.20 "

" Ploughs and cornshellers, each.....75 "

Passengers \$10-50; children under 12 years of age half price.

Passengers to Atlanta, head of Ga. Railroad, \$7.

German or other emigrants, in lots of 20 or more, will be carried over the above roads at 2 cents per mile.

Goods consigned to S. C. Railroad Co. will be forwarded free of commissions. Freight may be paid at Augusta, Atlanta, or Oothicaloga.

J. EDGAR THOMSON, Ch. Eng. and Gen. Agent.

Augusta, Oct. 21 1845. 44 ly

## SUMMER ARRANGEMENT.—NEW YORK AND ERIE RAILROAD LINE, from April

1st until further notice, will run daily (Sundays excepted) between the city of New York and Middletown, Goshen, and intermediate places, as follows:

FOR PASSENGERS—

Leave New York at 7 A. M. and 4 P. M.

" Middletown at 6½ A. M. and 5½ P. M.

FARE REDUCED TO \$1 25 to Middletown—way in proportion. Breakfast, supper and berths can be had on the steamboat.

FOR FREIGHT—

Leave New York at 5 P. M.

" Middletown at 12 M.

The names of the consignee and of the station where to be left, must be distinctly marked upon each article shipped. Freight not received after 5 P. M. in New York.

Apply to J. F. Clarkson, agent, at office corner of Duane and West sts.

H. C. SEYMOUR, Sup't.

March 25th, 1846.

Stages run daily from Middletown, on the arrival of the afternoon train, to Milford, Carbondale, Honesdale, Montrose, Towanda, Owego, and West; also to Monticello, Windsor, Binghamton, Ithaca, etc., etc. Agent on board. 13 lf

## BALTIMORE AND OHIO RAILROAD. MAIN STEM. The Train carrying the

Great Western Mail leaves Baltimore every morning at 7½ and

Cumberland at 8 o'clock, passing Ellicott's Mills, Frederick, Harpers Ferry, Martinsburgh and Hancock, connecting daily each way with—the Washington Trains at the Relay House seven miles from Baltimore, with the Winchester Trains at Harpers Ferry—with the various railroad and steamboat lines between Baltimore and Philadelphia and with the lines of Post Coaches between Cumberland and Wheeling and the fine Steamboats on the Monongahela Slack Water between Brownsville and Pittsburgh. Time of arrival at both Cumberland and Baltimore 5½ P. M. Fare between those points \$7, and 4 cents per mile for less distances. Fare through to Wheeling \$11 and time about 36 hours, to Pittsburgh \$10, and time about 32 hours. Through tickets from Philadelphia to Wheeling \$13, to Pittsburgh \$12. Extra train daily except Sundays from Baltimore to Frederick at 4 P. M., and from Frederick to Baltimore at 8 A. M.

WASHINGTON BRANCH.

Daily trains at 9 A. M. and 5 P. M. and 19 at night from Baltimore and at 6 A. M. and 5½ P. M. from Washington, connecting daily with the lines North, South and West, at Baltimore, Washington and the Relay house. Fare \$1 60 through between Baltimore and Washington, in either direction, 4 cents per mile for intermediate distances. 43 ly

**BALTIMORE AND SUSQUEHANNA**  
Railroad. The Passenger train runs daily except Sunday, as follows:

Leaves Baltimore at 9 a.m., and arrives at 6 p.m. Arrives at York at 12 p.m., and leaves for Columbia at 1 p.m. Leaves Columbia at 2 p.m., and leaves York for Baltimore at 3 p.m. Fare to York \$2. Wrightsville \$2 50, and Columbia \$2 62½. The train connects at York with stages for Harrisburg, Gettysburg, Chambersburg, Pittsburg and York Springs.

Fare to Pittsburg. The company is authorized by the proprietors of Passenger lines on the Pennsylvania improvements, to receive the fare for the whole distance from Baltimore to Pittsburg. Baltimore to Pittsburg.—Fare through, \$9 and \$10.

Afternoon train. This train leaves the ticket office daily, Sundays excepted, at 3½ p.m. for Cockeysville, Parkton, Green Springs, Owings' Mills, etc.

Returning, leaves Parkton at 6 and Cockeysville and Owings' Mills at 7, arriving in Baltimore at 9 o'clock a.m.

Tickets for the round trip to and from any point can be procured from the agents at the ticket offices or from the conductors in the cars. The fare when tickets are thus procured, will be 25 per cent. less, and the tickets will be good for the same and following day any passenger train.

D. C. H. BORDLEY, Sup't.  
Ticket Office, 63 North st.

31 1y

**CENTRAL RAILROAD-FROM SAVANNAH**  
to Macon. Distance 190 miles.

This Road is open for the transportation of Passengers and Freight. Rates of Passage, \$8 00. Freight—

On weight goods generally... 50 cts. per hundred.  
On measurement goods... 13 cts. per cubic ft.  
On brls. wet (except molasses and oil)... \$1 50 per barrel.  
On brls. dry (except lime)... 80 cts. per barrel.

On iron in pigs or bars, castings for mills, and unboxed machinery... 40 cts. per hundred.

On hhds. and pipes of liquor, not over 120 gallons... \$5 00 per hhd.

On molasses and oil... \$6 00 per hhd.

Goods addressed to F. WINTER, Agent, forwarded free of commission. THOMAS PURSE, 40 Gen'l. Sup't. Transportation.

**NEW YORK & HARLEM RAILROAD CO.**—Summer Arrangement.

On and after Friday, May 1st, 1846, the cars will run as follows:

Leave City Hall for Yorkville, Harlem and Morrianna, at 7, 8, 9, 10 and 11 a. m., and at 1, 2, 3, 30, 4, 30, 5, 6, and 6 30 p. m.

Leave City Hall for Fordham and Williams' Bridge, at 7, 10 and 11 a. m., and at 2, 3, 30, 5, and 6 30 p. m.

Leave City Hall for Hunt's Bridge, Bronx, Tuckahoe, Hart's Corners and White Plains, at 7 and 10 a. m., and at 2 and 5 p. m.

Leave Harlem and Yorkville, at 7 10, 8 10, 9, 10, 11 10 a. m., and at 12 40, 2, 3 10, 5 10, 6 10, and 7 p. m.

Leave Williams' Bridge and Fordham, at 6 45, 7 45, and 10 45 a. m., and at 12 15, 2 45, 4 45, and 5 45 p. m.

Leave White Plains, at 7 and 10 a. m., and at 2 and 5 p. m.

The freight train will leave the City Hall at 1 o'clock, p. m., and leave White Plains at 1 o'clock in the morning.

On Sundays, the White Plains train will leave the City Hall at 7 a. m. and 5 30 p. m.; will leave White Plains at 7 a. m. and 6 p. m.

On Sundays, the Harlem and Williams' Bridge trains will be regulated according to the state of the weather. 18

**RAILROAD IRON.—THE "MONTGOMERY"**

Iron Company, Danville, Pa., is prepared to execute orders for the heavy Rail Bars of any pattern now in use, in this country or in Europe, and equal in every respect in point of quality. Apply to MURDOCK, LEAVITT & CO., Agents.

Corner of Cedar and Greenwich Sts. 43 1y

**LITTLE MIAMI RAILROAD.**—Distance 65½ Miles. Fare, \$1 50. From 1st November to 1st March Passenger Trains leave Cincinnati for

Xenia at 11 o'clock, A.M.

Returning, leaves Xenia at 8½ o'clock, A.M. Freight Trains run daily, Sundays excepted.

At Xenia, Passenger Trains connect with daily lines of stages to Columbus, Wheeling, Cleveland and Sandusky city.

W. H. CLEMENT,  
Supt. and Engineer.

1y 1

**NICOLL'S PATENT SAFETY SWITCH**

for Railroad Turnouts. This invention, for some time in successful operation on one of the principal railroads in the country, effectually prevents engines and their trains from running off the track at a switch, left wrong by accident or design.

It acts independently of the main track rails, being laid down, or removed, without cutting or displacing them.

It is never touched by passing trains, except when in use, preventing their running off the track. It is simple in its construction and operation, requiring only two Castings and two Rails; the latter, even if much worn or used, not objectionable.

Working Models of the Safety Switch may be seen at Messrs. Davenport and Bridges, Cambridgeport, Mass., and at the office of the Railroad Journal, New York.

Plans, Specifications, and all information obtained on application to the Subscriber, Inventor, and Patentee. G. A. NICOLLS, Reading, Pa.

ja45

**KEARNEY FIRE BRICK.** F. W. BRINLEY, Manufacturer, Perth Amboy, N. J.

Guaranteed equal to any, either domestic or foreign. Any shape or size made to order. Terms, 4 mos. from delivery of brick on board. Refer to

James P. Allaire, } New York.  
Peter Cooper, }  
Murdoch, Leavitt & Co. }

J. Triplett & Son, Richmond, Va.

J. R. Anderson, Tredegar Iron Works, Richmond, Va.

J. Patton, Jr. } Philadelphia, Pa.  
Golwell & Co. }

J. M. L. & W. H. Scovill, Waterbury, Con.

N. E. Screw Co. } Providence, R. I.  
Eagle Screw Co. }

William Parker, Supt. Bost. and Worc. R. R.

New Jersey Malleable Iron Co., Newark, N. J.

Gardiner, Harrison & Co. Newark, N. J. 25,000 to 30,000 made weekly. 35 1y

**GEORGE VAIL & CO., SPEEDWELL IRON**

Works, Morristown, Morris Co., N. J.—Manufacturers of Railroad Machinery; Wrought Iron Tires, made from the best iron, either hammered or rolled, from 1½ in. to 2½ in. thick.—bored and turned outside if required. Railroad Companies wishing to order, will please give the exact inside diameter, or circumference, to which they wish the Tires made, and they may rely upon being served according to order, and also punctually, as a large quantity of the straight bar is kept constantly on hand.—Crank Axles, made from the best refined iron; Straight Axles, for Outside Connection Engines; Wrot. Iron Engine and Truck Frames; Railroad Jack Screws; Railroad Pumping and Sawing Machines, to be driven by the Locomotive; Stationary Steam Engines; Wrot. Iron work for Steamboats, and Shafting of any size; Grist Mill, Saw Mill and Paper Mill Machinery; Mill Gearing and Mill Wright work of all kinds; Steam Saw Mills of simple and economical construction, and very effective Iron and Brass Castings of all descriptions. ja45 1y

FLAT BAR, ENGLISH ROLLED, Railroad Iron, 2½ x ½—a large part suitable to relay. For sale by C. J. F. BINNEY, Commission Merchant, 1 City Wharf, Boston, Mass. 11 1m

RAILROAD IRON WANTED. WANTED, 50 tons of Light Flat Bar Railroad Iron. The advertisers would prefer second-hand iron, if not too much worn. Address Box 384 Philadelphia P. O.—Post paid. 8 4t

**TROY AND GREENBUSH RAILROAD.**

Spring Arrangement. Trains will be run on this Road as follows, until further notice, Sundays excepted.

Leave Troy at 6½ A.M. Leave Albany at 7 A.M.

" " 7½ " " " 8 " "

" " 8½ " " " 9 " "

" " 9½ " " " 10 " "

" " 10½ " " " 11 " "

" " 11½ " " " 12 M. "

" " 1 P.M. " " 1½ P.M. "

" " 2 " " " 3 " "

" " 3 " " " 4 " "

" " 4 " " " 5 " "

" " 5 " " " 6 " "

" " 6 " " " 7 " "

The 6½ a.m. and 2 o'clock p.m. runs from Troy, to Boston runs.

The 12 m. and 6 o'clock p.m. trains from Boston runs.

Passengers from Albany will leave in the Boston Ferry Boat at the foot of Maiden Lane, which starts promptly at the time above advertised.

Passengers will be taken and left at the principal Hotels in River Street, in Troy, and at the Nail Works and Bath Ferry.

L. R. SARGENT,  
Superintendent. 14 1y

Troy, April 1st, 1846.

**MACHINE WORKS OF ROGERS,**

Ketchum & Grosvenor, Patterson, N. J. The undersigned receive orders for the following articles, manufactured by them of the most superior description in every particular. Their works being extensive and the number of hands employed being large, they are enabled to execute both large and small orders with promptness and despatch.

Railroad Work. Locomotive steam engines and tenders; Driving and other locomotive wheels, axles, springs & flange tires; car wheels of cast iron, from a variety of patterns, and chills; car wheels of cast iron with wrought tires; axles of best American refined iron; springs; boxes and bolts for cars.

Cotton, Wool and Flax Machinery of all descriptions and of the most improved patterns, style and workmanship.

Mill gearing and Millwright work generally; hydraulic and other presses; press screws; callenders; lathes and tools of all kinds; iron and brass castings of all descriptions.

ROGERS, KETCHUM & GROSVENOR, 45 Paterson, N. J., or 60 Wall street, N. York.

**TO RAILROAD COMPANIES AND MANUFACTURERS**

of railroad Machinery. The subscribers have for sale Am. and English bar iron, of all sizes; English blister, cast, shear and spring steel; Juniata rods; car axles, made of double refined iron; sheet and boiler iron, cut to pattern; tiers for locomotive engines, and other railroad carriage wheels, made from common and double refined B. O. iron; the latter a very superior article. The tires are made by Messrs. Baldwin & Whitney, locomotive engine manufacturers of this city. Orders addressed to them, or to us, will be promptly executed.

When the exact diameter of the wheel is stated in the order, a fit to those wheels is guaranteed, saving to the purchaser the expense of turning them out inside.

THOMAS & EDMUND GEORGE, ja45 N. E. cor. 12th and Market sts., Philad., Pa.

**THE SUBSCRIBERS, AGENTS FOR**

the sale of Codorus, Glendon, Spring Mill and Valley, } Pig Iron.

Have now a supply, and respectfully solicit the patronage of persons engaged in the making of Machinery, for which purpose the above makes of Pig Iron are particularly adapted.

They are also sole Agents for Watson's celebrated Fire Bricks and prepared Kaolin or Fire Clay, orders for which are promptly supplied.

SAM'L KIMBER, & CO., 59 North Wharves, Philadelphia, Pa. Jan. 14, 1846. [1y4]



Mar. 20th 4 South Front St., Philadelphia.

The works being on an extensive scale, all orders will be executed with promptness and despatch. Communications addressed to Mr. William H. Dobbs, Superintendent, will meet with immediate attention.

ANDREW C. GRAY,  
a45 President of the Newcastle Manuf. Co.

etc. The Subscriber having made important improvements in the construction of rails, mode of guarding against accidents from insecure joints, etc.—respectfully offers to dispose of Company, State Rights, etc., under the privileges of *letters patent* to Railroad Companies, Iron Founders, and others interested in the works to which the same relate. Companies reconstructing their tracks now have an opportunity of *improving* their roads on terms very advantageous to the varied interests connected with their construction and operation; roads having in use flat bar rails are particularly interested, as such are permanently available by the plan.

W. Mc. C. CUSHMAN, *Civil Engineer,*  
Albany, N. Y.

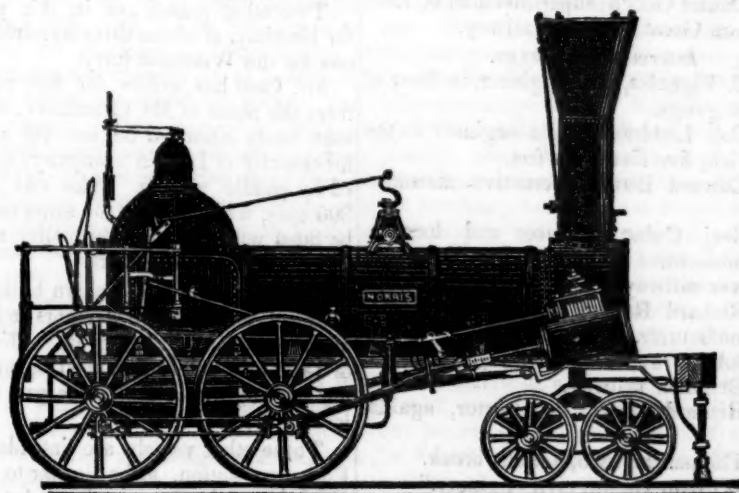
Mr. C. also announces that Railroads, and other works pertaining to the profession, may be constructed under his advice or personal supervision. Applications must be post paid.

**PASCAL IRON WORKS.**

From 4 inches to  $\frac{1}{2}$  in calibre and 2 to 12 feet long, capable of sustaining pressure from 400 to 2500 lbs. per square inch, with Stop Cocks, T's, L's, and other fixtures to suit, fitting together, with screw joints, suitable for STEAM, WATER, GAS, and for LOCOMOTIVE and other STEAM BOILER FLUES.



Manufactured and for sale by  
**MORRIS, TASKER & MORRIS.**  
 Warehouse S. E. Corner of Third & Walnut Streets,  
**PHILADELPHIA.**



Class 1,	15 inches	Diameter of	Cylinder,	× 20 inches	Stroke.
" 2,	14	"	"	× 24	" "
" 3,	14 $\frac{1}{2}$	"	"	× 20	" "
" 4,	12 $\frac{1}{2}$	"	"	× 20	" "
" 5,	11 $\frac{1}{2}$	"	"	× 20	" "
" 6,	10 $\frac{1}{2}$	"	"	× 18	" "

With Wheels of any dimensions, with their Patent Arrangement for Variable Expansion.  
Castings of all kinds made to order: and they call attention to their Chilled Wheels  
or the Trucks of Locomotives, Tenders and Cars.

**NORRIS, BROTHERS.**

**G** Washington city, Richmond, Petersburg, Weldon and Charleston, S. C., direct to New Orleans. The only Line which carries the Great Southern Mail, and Twenty-four Hours in advance of Bay Line, leaving Baltimore same day.

Passengers leaving New York at 4½ P.M., Philadelphia at 10 P.M., and Baltimore at 6½ A.M., proceed without delay at any point, by this line, reaching Richmond in *eleven*, Petersburg in *thirteen and a half hours*, and Charleston, S. C., in *two days from Baltimore*.

Fare from Baltimore to Charleston.....	\$21 00
" " " Richmond.....	6 60

For Tickets, or further information, apply at the  
*Southern Ticket Office*, adjoining the *Washington*  
*Railroad Office*, Pratt street, Baltimore, to  
**STOCTON & FALLS, Agents.**

**V Dam For Sale.** A lot of land on Gravelly Point, so called, on the Mill Dam, in Roxbury, fronting on and east of Parker street, containing 68,497 square feet, with the following buildings thereon standing.

Main brick building, 120 feet long, by 46 ft wide, two stories high. A machine shop, 47x43 feet, with large engine, face, screw, and other lathes, suitable to do any kind of work.

Work shop, 86x35 feet, on the same floor with the pattern shop.

Forge shop, 118 feet long by 44 feet wide on the ground floor, with two large water wheels, each 16 feet long, 9 ft diameter, with all the gearing, shafts, drums, pulleys, &c., large and small trip hammers, turnaces, forges, rolling mill, with large balance wheel and a large blowing apparatus for the foundry.

Foundry, at end of main brick building, 60x45 feet two stories high, with a shed part 45x20 feet, containing a large air furnace, cupola, crane and corn oven.

Store house—a range of buildings for storage, etc., 200 feet long by 20 wide.

Locomotive shop, adjoining main building, fronting on Parker street. 54x25 feet.

Also—A lot of land on the canal, west side of Parker st., containing 6000 feet, with the following buildings thereon standing:

Boiler house 50 feet long by 30 feet wide, two stories.

Blacksmith shop, 49 feet long by 20 feet wide.

For terms, apply to HENRY ANDREWS, 48  
State st., or to CURTIS, LEAVENS & CO., 106  
State st., Boston, or to A. & G. RALSTON & Co.,  
Philadelphia.

10—60 lbs. to the yard. Depth of rail, 3½ inches; width of base, 4 inches; width of top, 2½ inches; length of bars, 15 and 17½ feet. Apply to

A Steam Pile Driver—built by "Dunham & Co." in complete order; has never been used, and for sale a bargain. Cost originally \$5,000. Also 13 railway Passenger Cars, that have never been used, which will be sold a bargain. **84**

April 11. DAVIS, BROOKS & CO.,  
10 30 Wall street.

**The Gauge Question.**

We find in the *Railway Express*, of 3d April, a list of those who were examined by the commissioners in relation to this question. It includes 46 persons, among whom are several of the most eminent engineers of the kingdom. We give the list entire, that our readers may know who they are.

"The appendix to the report of the gauge commissioners, containing the evidence taken before them, will form a thick folio volume of nearly 400 pages. Forty witnesses were examined, many of them more than once. This number included almost every individual eminent in the railway world, either as an engineer or a manufacturer of locomotives, a manager, a secretary, a carrier, or an amalgamator. The following will be found the only correct list yet published, and will give some idea of the mass of information on which the commissioners founded their report. For convenience of comparison, the list has been divided into—'in favor of the narrow gauge with national uniformity;' 'in favor of the broad gauge, with break of gauge;' 'in favor of an intermediate gauge.'

**In Favor of Narrow Gauge and Uniformity.**

1. Robert Stephenson, civil engineer and manufacturer of locomotives (son of George Stephenson, the inventor of railway locomotion).
2. Joseph Lock, civil engineer, (who completed the Grand Junction railway).
3. James Edward McConnel, superintendent of the locomotive department on the Birmingham and Gloucester railway.
4. J. U. Rastrick, engineer of the Brighton railway.
5. Albinus Martin, resident engineer and superintendent of the Southwestern railway.
6. Captain J. M. Laws, general manager of the Leeds and Manchester railway.
7. John Braithwaite, chief engineer of the Eastern Counties (adopted narrow gauge in lieu of 5 feet gauge).
8. Captain Wm. O'Brien, secretary of the Southeastern railway.
9. Thomas Bucton, secretary to the Brighton railway.
10. Thomas C. Mills, manager of the goods department at the London and Birmingham railway.
11. George P. Bidder, civil engineer on branches of the London and Birmingham, and a friend of R. Stephenson.
12. George Bodmer, locomotive manufacturer.
13. William Furnihough, superintendent of Eastern Counties locomotives.
14. Wyndham Harding, late manager of the Bristol and Gloucester railway.
15. Captain Mark Huish, general manager of the Grand Junction and Liverpool and Manchester.
16. Benjamin W. Horne, carrier and partner with Mr. Chaplin.
17. Evan Jones, agent for Chaplin and Horne, carriers, at Camden station.
18. Thomas Whitaker, civil engineer.
19. Richard Creed, secretary to the London and Birmingham railway.
20. Peter Clarke, manager of the Brighton railway.

21. James Brown Head, of Sir Robert Price's iron and coal works.

22. W. James Chaplin, chairman of the Southwestern, and a carrier with Mr. Horne.

23. John Hawkshaw, engineer of the Manchester and Leeds.

24. William Bass, agent to Messrs. Pickford.

25. John Ellis, deputy chairman of the Midland railway.

26. Joseph Maynard, of the firm of Pickfords, carriers.

27. Edward Woods, civil engineer.

28. James P. Budd, manager of copper works and coal mines, deputy chairman of the Welsh Midland.

29. Nicholas Wood, civil engineer, (author of a celebrated work on the steam engine).

30. George Hudson, M. P., director of a thousand miles of railway.

**Opposed to Break, Expressing no Opinion about Gauge.**

31. Gen. Sir Willoughby Gordon, quartermaster general.

32. Major General Sir John Burgoyne, quartermaster general.

33. Major General Pasley was opposed to break, but in favor of a five foot gauge if practicable now.

**In favor of Broad Gauge with Break of Gauge.**

34. Isambard Kingdom Brunel, (inventor of the broad gauge,) engineer of the Great Western railway.

35. Charles Alexander Saunders, secretary of the Great Western railway.

36. Seymour Clerk, superintendent of traffic on Great Western railway.

37. Daniel Gooch, superintendent of locomotives on Great Western railway.

**Intermediate Gauge.**

38. C. Vignoles, civil engineer, in favor of a six foot gauge.

39. Col. Landmann, late engineer to the Greenwich, five feet to six feet.

40. Edward Bury, locomotive manufacturer.

41. Benj. Cubitt, engineer and locomotive manufacturer to the Croydon, Brighton, and Dover railways.

42. Richard Roberts, formerly a locomotive manufacturer.

43. John Gray, locomotive superintendent of the Brighton railway.

44. Richard Downs, contractor, against break.

45. Thomas Jackson, against break.

46. William Cubitt, civil engineer."

**Iron Ship Building.**

We find the following account in relation to the progress of iron ship building near Liverpool, Eng. It will very naturally lead those who watch the signs of the times, to the conclusion that this branch of business, as well as railroads, is destined to make large demands upon the iron manufacture of this country as well as England. Few indeed, at this day, estimate this demand correctly.

*Iron Steam Vessel Building on the Mersey.* Among the numerous objects of interest which

Liverpool presents, perhaps few are more important than the progress now making in the new and rising art of iron ship building.

The extensive new premises erected by Messrs. Vernon and co., being highest up the river, first require attention. No expense has been spared by these builders to provide the most efficient means for carrying on their work. Three very fine ships are now on the stocks. The first is the *Windsor*, of about 800 tons, building for the city of Dublin company, from the plans of Mr. Grantham.—The second vessel of the same dimensions as the *Windsor*, is for the Cork company, and is called the *Ajax*. The third is a very large steamer, of about 1,300 tons, building for the Peninsula and Oriental company; this vessel is about half plated. Messrs. Vernon and Co. have orders for two more steamers, one of about 700 tons, also for the Cork company, and one of 300 tons for Fleetwood, from Mr. Grantham's plan. (The *Windsor* and *Ajax* have been both launched since this notice was written.)

At Messrs. Hodgson and Co.'s works, Brunswick dock, five iron vessels are now building. That nearest completion is about 250 tons, and is to be worked by a screw.—She is intended for Buenos Ayres. The next is the *Antelope*, of nearly 600 tons, intended as a packet ship between this port and the Brazils. She is of great length and very fine lines, and is to be powerfully rigged. The next to her is a large vessel for the New York trade, to be 1000 tons old measurement, or 1500 tons new. She is to be heavily rigged, and with four masts. These two last vessels are built from the plans of Mr. Grantham, and are to be propelled by the screw, on the direct principle.

Two other vessels are in this yard: one for Bombay, of about three hundred tons, and one for the Woodside ferry.

Mr. Cato has orders for four vessels, all from the plans of Mr. Grantham: one of 650 tons, lately launched but not yet completed, for the city of Dublin company, to be worked by paddle wheels. Also two vessels of 300 tons, which are for the same company, to be fitted with the screw propeller, and rigged as three masted schooners.

Mr. Laird, the well known builder at Birkenhead, has also five steamers in the course of construction. The frigate "*Birkenhead*," of 1400 tons, lately launched, is now receiving her engines in the Trafalgar dock, and looks remarkably well.

Three other vessels are intended for the Folkestone station, to be similar to a beautiful steamer lately completed for the same line, named the *Prince Ernest*, which has been highly approved of for her speed and good qualities.

The first iron steam vessel which appeared on the Mersey was built in Staffordshire and came here in 1824, and the first that was built here, was constructed by Messrs. Fawcett, Preston and Co., in 1829; both of these were intended for the inland navigation of Ireland. They have been constantly at work, and are said to be still in good condition.

While on this subject we may relate an



interesting fact that has come to our knowledge. In Mr. Grantham's work on iron ship building he describes an iron steamer, the *Aaron Manby*, which was built in this country in 1821, and sent to the Seine, where she worked between Havre and Rouen.—This steamer, with two others built about the same time, have been most severely worked and much neglected, but were on examination lately, found to be in such good condition that a firm in Rouen has undertaken to lengthen them, preparatory to receiving new machinery, and being again fitted for service.—*Liverpool Standard*.

**Channel Steamers.**—On Thursday last the *Belgian railway*, a very fine iron steamer fitted out for the Belgian government, in order to carry the mails between Ostend and Dover, was tried down the river. She has been built by Messrs. Ditchburn and Mare, of Blackwall, and engine fitted by Messrs. Maudslay and Field. She left Blackwall at 20 minutes past 11, and returned to her moorings at 20 minutes past five; having gone down ten miles below the Nore and back in 6 hours, including a stoppage of some minutes at Woolwich. The trial was in every respect highly satisfactory.

The *Belgian railway* is another of that class of vessels which within the last two or three years has created such a revolution in the channel service, as regards speed and accommodation. Formerly, the insufficiency of the packet vessels used to be the subject of constant and well founded complaints; they were all wooden vessels, and though managed with great skill, the time they occupied in performing their voyages was very great under the best of circumstances, and in bad weather so much so, as to deter passengers from going with them. The first step in advance was the purchase by government of the *Dover*, an iron vessel built at Liverpool; her speed was about one-third greater than the old vessels. Then came the *Princess Alice*, whose speed was nearly twice as great as that of the old packets. She was followed by the *Princess Mary*, *Princess Maude*, and *Queen of the Belgians*, for the South Eastern railway company. The *Ondine* came next in order; she was built for a private company at Dover, but subsequently bought by the proprietor of the *Morning Herald* to carry despatches. The South Eastern company then got the *Queen of the French* and *Prince Ernest*. The whole of these vessels, beginning with the *Alice*, have kept up the communication with France and Belgium in all weathers with the greatest regularity, and at times when the old vessels dare not "look at it."—The government finding that their old vessels could not compete with the private ones, and that they got none of the passengers, ordered several new ones to be built on the model and proportions of the *Princess Alice*. The *Onyx*, the first of their new batch, went to her station this week, and the *Violet*, her sister boat, was as well as the *Belgian railway*, tried down the river on Thursday.

**Thames Tunnel.**—Receipts for the week ending 28th February, £76 3s. 11d.; and number of passengers, 18,382.

#### The Iron Trade.

This branch of industry is receiving increased attention in Europe as well as in this country. There is evidently apprehension in England, of greater competition in the trade in this country than has ever before existed—and well there may be, as the time will come when we shall export more iron than we ever imported. We only need experience—and we are acquiring that rapidly—to enable us to compete successfully with the cheap labor, long experience and capital of Britain. The next ten years will produce changes in this trade which will astonish even the most sanguine in this country.

The annexed article from a late London Mining Journal shows that it is deemed necessary to look to their laurels, if they are to be retained. We also give the letter from the United States alluded to.

"Among our original correspondence, in another column, will be found a letter on the anthracite iron of Pennsylvania—one of immense importance to all who are interested in the iron trade, as showing clearly the exertions brother Jonathan is making to rival us in the production, price and finish, of one of the staple commodities of the country.—Our readers are doubtless aware of the enormous deposits of iron ore and anthracite coal in the state of Pennsylvania alone. Hitherto, these sources of wealth with which nature has so abundantly supplied America, have lain comparatively dormant; and Scotch pig iron has formed an article of extensive transatlantic exportation—its low figure, as compared with English and Welsh iron, enabling it to bear the cost of freight, and then obtain a remunerative price in the American market. We have, on many occasions during the past year, re-echoed the warning note to the iron masters, that it behoved them, by taking advantage of every improvement, to improve the quality of their make at the lowest possible cost—that, while the continental manufacturers, as well as those of America are straining every nerve to extend their trade, they may be still in a position to hold out their own superiority, and thus retain those markets, which, without strenuous exertions, will be lost to them forever. It appears, from the letter to which we refer, that pig iron, of a very superior description to Scotch, can be delivered at Philadelphia, at from 15 to \$17, or £3 9s. 9d., to £3 16s. 6d. per ton; our present (even greatly reduced) quotations for Scotch pig are from 65s. to 70s., which, with freight across the Atlantic, cannot by any possibility stand in competition with iron of American manufacture. As, however, that country is not yet capable of supplying its own requirements, some demand for Scotch pig iron must continue; but when we see the capitalists of the United States devoting their money, their talent, and their inventive faculties, to the improvement of this branch of manufacture, investigating, experimenting on, and finally adopting the discoveries of all other countries when found advantageous—when we find them adapting to the peculiar produce of the country the valuable discoveries of the

lamented Mr. CRANE, in the application of anthracite to iron smelting, the economical employment of the gases from the furnaces, to the re-heating, and to working the blast, (a plan lately adopted in Belgium and France, and found completely successful,) and giving every indication that they are determined to "go a-head," and take every advantage of the stores of mineral which nature has placed within their reach—we again say, that it behoves the iron masters of this country, and Scotland, to persevere in the improvement of their make, and thus keep up that demand in those continental markets, which with care may be secured for many years to come.—These islands have been equally blest with a profusion of inexhaustible mineral deposit; and notwithstanding the boundless profusion of ores and coal with which nature has scattered America, our manufacturers have it still in their power to retain their position in the metal markets of the world. The principles of free trade are gradually disseminating themselves throughout all civilized countries—and with a clear stage, and unshackled by the fetters of restrictive tariffs, the energies and perseverance of those engaged in the development of British produce, shall carry them triumphant over all competitors throughout the world."

The letter referred to, which is dated Feb, 27, 1846, says—

"The principal reason for the few orders you have received from us for a long time is that we are now getting an anthracite pig iron, which is taking the place of Scotch entirely with our customers—which is a great change in the iron trade of this country, and will eventually, and very shortly, stop the importation of Scotch iron. Knowing the interest you take in the iron trade, we have sent two samples of pig, made with the anthracite coal. The flat piece of iron will take more old iron, and is more fluid than any Scotch iron; and our customers give it the preference. The casting we send is made from the No. 2 of this iron; and you will see by putting the file to it, that it is very soft.—

The other piece is also made from anthracite coal, and is a very superior iron. The cost of making the first is as follows, as we have it from the manufacturer. The writer has just returned from the furnace, which is turning out 85 to 90 tons pig iron per week, of beautiful quality:

4,400 lbs. coal, or 2 tons, at \$2 43.	\$4 86
2½ tons ore, at 1 66.	4 15
1 ton limestone.	0 50
Freight to tidewater, Philadelphia.	2 50
	15 51—£3 9s. 9d.

"The other iron is made about 10 miles from Philadelphia, and the cost is as follows:

2½ tons ore at \$2 50.	\$6 25
2 tons lime, at \$3 00.	6 00
Limestone.	0 50
Labor.	3 50
Transportation to city.	0 75
	17 00—£3 16s. 8s.

"This furnace will not take so much coal as we have stated, as the blast is heated by the gas from the top, and the steam engine is

worked by heat from the same source—the boiler being at the top of the furnace. So you will see we are pretty well prepared for any reduction in the tariff, *which we think will take place*; if it does, iron can be made cheaper as labor will fall."

There has been a reduction in the price of iron. The quotations of 20th March, were rails £10 15s. a £11, and Scotch pig, £3 10s. a £3 12s. 6d.

On the 27th the quotations are rails £0 0s. a £10 15s., and Scotch pig £0 0s. a £3 10.

**Iron.**—In Welsh and Staffordshire very little doing, and prices are about 5s. lower than those quoted in last week's *Mining Journal*. Scotch pig has been in fair demand at 70s. for exportation, and many sales have been made. A few sales of Russian, at about prices quoted, but in Swedish nothing doing.

#### I. Projected Communication Across the Isthmus of Panama.

The wonder is that this important work does not command more attention, especially from Americans. It should be an American work—or not wholly an European enterprise; yet we do not hear of any effective movement on the part of our country, or countrymen, in favor of the work—though other nations are moving in it.

We find, in a late number of the *London Mining Journal*, the following extract from the report of M. Garella, who has made an examination of the pass. It is truly a gigantic undertaking, yet the increasing business of the nations will require a passage, either a canal or a railroad—the latter we presume—before many years.

A railroad of sufficient capacity to allow the passage of a ship of a thousand tons may be constructed for less money than a canal for a ship of same dimensions. A railroad with three tracks would receive a cradle upon which a vessel would ride as much at ease as upon the water—and it would not bear much more heavily upon any one point of the rail than the heaviest locomotives of the present day.

We have, in several former numbers, given an account of the projected ship canal across the isthmus of Tehuantepec, surveyed by Signor Gaetano Moro, and conceded to Don Jose de Garay, by the Mexican government. We now have the pleasure of giving to our readers a short extract from the report of M. Garella, one of the distinguished members of the *Ponts et Chaussées* in Paris, who had been deputed to study the important question of the practicability of cutting through the isthmus of Panama. This clever engineer has made a most minute survey of the tract of land between the two oceans, and made his estimates of the expenses; and in his opinion, the establishing of a railway, or a good Macadamised road, offers but very few difficulties, and that the cutting a ship canal is perfectly practicable. The slip of land which joins North and South America measures at least 1,430 miles, (2,300 kilometres) in length. This immense tract of land presents various heights. At Panama itself, between that town and Chagres, there are only 40½ miles,—from the mouth of the Caimeto, in the vicinity of Panama to the mouth of the Rio Chagres, on the Atlantic, the distance is only

36 miles—and a little more to the east, toward the bay of San Blas, only 31½ miles. This approach of these two great oceans is truly remarkable. After having carefully taken his levels, and well surveyed the isthmus as to its facilities and difficulties, he was convinced that it would be practicable to cut a navigable canal for vessels of 1200 tons. This canal to the Pacific ocean must be cut through the valley of the Caimeto, so as to run into the sea at the anchorage of Vaca de Monte, situated about 12 miles to the west of Panama, and towards the Atlantic ocean, by the valley of Rio Chagres, to meet on the ocean, not at the harbor of Chagres, which is inaccessible to large vessels, but at the bay of Limon, five miles distant—thus would be insured on both sides a free and ready communication of the canal with the sea. The length of the canal would be in all 47½ miles—of which 34 are between the Pacific ocean and the Chagres, 7½ between Rio Chagres and the bay of Limon, and 5½ in the bed of the Chagres. The dimensions to be as follows—depth, 28½ feet; breadth at water level, 149½ feet, breadth at bottom, 65½ feet. The canals for navigating boats and barges in France, are at most from 3½ to 6½ feet (2 metres) deep, from 15 to 18 metres (59½ feet) broad at water level, and at the most 39½ feet at the bottom. The largest of the existing canals is the Caledonian, which is a ship canal, and is 20 feet deep, 122 in breadth at the water level, and 53 at the bottom. M. Garella's project is distinguished by a very bold feature. To carry an ordinary canal over an elevation of 460 feet, would cause no surprise; but this is no longer the case, when it is the question of a ship canal,—and finding that the elevation would be so great to overcome, and that at a most enormous expense, what with locks, forming the summit level, and the country offering no means of giving a sufficient quantity of water, to correspond with the draught of the canal, he conceived the gigantic idea of making (what is generally done in ordinary canals) a subterranean passage. All those who have hitherto written on the canal of the isthmus of Panama, have been dismayed by such a project—perhaps through not having deeply examined it. On an ordinary canal, a tunnel need not be more than 8 to 10 metres (33 feet) high, between the bottom of the canal and the summit of the arch, with a breadth nearly similar. On a ship canal, when the vessels would necessarily keep in their lower masts, a height of about 122 feet would be required (nearly the height of the column of Napoleon, Place Vendome, Paris,) and a breadth of 69 feet. The idea of such an undertaking could only be contemplated by a masterly mind. This subterranean passage will be cut through a very hard porphyry—it must be of the length of 5900 yards, and will be approached by trenches of from 45 to 50 metres (165 feet deep.) It would permit the establishing of division at 328 feet under the culminating point—so that the elevation, to be surmounted by locks, would now be only 157 feet above the level of the low water mark. On the other side, on account of the

difference of the tides, it would be 177 feet, and the tunnel alone would cost 1,433,800l. The expense of the canal with the tunnel would be, according to the calculations of M. Garella, 5,000,000l., and with the interior walling of the passage, it would be 5,560,000l. The profits of the enterprise, after all the expenses deducted, would yield the sum of 5 per cent on the capital employed. M. Garella, in proposing this gigantic tunnel, does not absolutely recommend it, and has carefully examined what could be done, if it were thrown aside. In this case, he is of opinion to dig a trench 275 feet deep, and the bottom of which would be 49½ feet above the bottom of that of the subterranean passage, which would call for five locks more on each side, carrying the expenses to 5,960,000l. If it were reduced to canal, capable only of receiving vessels of 600 tons burden, the expense would still be 3,600,000l. A railway from Chagres to Panama would require 1,320,000l. A Macadamised road would be much less. As we have before stated, the isthmus of Tehuantepec has been studied, in a very careful manner, by Signor Moro, an experienced engineer, on behalf of a Mexican Company,—and that of Nigaraqua, in Central America, by Mr. Bailey, an officer of the British navy, who has conscientiously fulfilled his task in that laborious survey. The French government takes a very great interest in the accomplishment of this vast undertaking, and no doubt will render every assistance for carrying it out. We have seen the various plans of the three projects, and there will certainly be great difficulties to be overcome; but what will not science and the enterprise of man accomplish, if he has sufficient means at his disposal?

**Chesapeake and Ohio Canal.**—The Cumberland "Civilian" publishes a letter from Frederick which says:

"In regard to the prospects of the canal, I can only say, that I am encouraged to think that all will be well. In one opinion I have unlimited confidence: that the work will be completed, *under the present law*, to Cumberland. Negotiations are on foot here, and I think they will be concluded in a few days, which lead me to believe that the work will be forced ahead all along the line with great vigor and energy."

#### The Jamaica (W. I.) Railway.

We have not often had information in relation to the progress of railways in the West Indies, or in Cuba; but we hope to be able hereafter to give a full account of them. We take the following from the Jamaica Dispatch of March 11th:

"We are happy to continue our favorable accounts of the working of this railway. From a return made by the company as required by their act of incorporation, it appears that the first quarter's traffic stands as follows: passengers, 40,701; merchandize etc., 566 tons. The number of cattle and horses which have been transported on the railway are unimportant. It speaks highly in favor of the management, and is greatly to the credit of Mr. Smith, that not a solitary accident has occurred since the opening of the railway."



**New York and Erie Railroad, and the New York Members of the Legislature.**

**Legislature of New York.**—Assembly, April 23.—Evening session.—The house resumed the consideration of the New York and Erie railroad.

The question was taken and the bill was lost—ayes 24, noes 29.

Mr. Stevenson moved to reconsider; and the motion to reconsider lies on the table.

**Lost!**—the New York and Erie railroad bill, for selecting the best route, lost—and by New York city votes! Who could have anticipated such a result? Yet such is the record above; though we should be unwilling, were it not undeniable, to credit a record so discreditable to our city, which has an interest so deep, and abiding, in the early completion of this road.

It will be seen by the letter of our Cleveland correspondent, that the people of Ohio are waiting the construction of this road to continue the line on westward; then how important that we, here at its terminus, should give it our whole and undivided efforts until it shall be ready for use; and how mortifying that a measure so essential to its completion, and ultimate success, should be lost by the absence, or direct vote, of one of our city members. It must have been from misapprehension, and we therefore hope that on the final action, under the reconsideration of the subject, every man favorable to the success of this noble work, and especially every member from this city, will be in his place and do his duty.

**Great Western Steamship—Her First Arrival this Season.**

This noble ship came in on Tuesday, the 28th, after a passage of 17 days. She brings no very important news, except that the money market is easier, the cotton market firmer, and the iron market less brisk and prices lower.

In the Mining Journal of the 4th of April, we find the following quotations, viz:

Rails, £10 10s. a £10 15s., and bars, £11 per ton. Welsh cold blast foundry pig, £5 5s., and Scotch pig £3 10s.—which is lower than last accounts.

A correspondent of the Mining Journal says:

"The transactions in Welsh and Staffordshire continue very limited, and consequently a tendency to give way in price has appeared. In some instances £8 10s. for bars in Wales has been accepted; but in the continued depressed state of the money market, with only a dull demand for the continental markets, and none for the Indian, a brisk business cannot be looked for, except at further reduced rates. Sales of Scotch pig have been made at 68s. to 70s. on board at Glasgow: several export orders were given at these rates, but we cannot report any sale of magnitude, either for use or speculation. A few sales occurred both of Russian and Swedish, but in Swedish steel none."

**Glasgow Iron Trade.**—March 27.—During the course of the week not much iron has changed hands on speculation—prices, however, remain much the same as in our last. We quote the price as 69s. to 70s. for choice of Nos. It is supposed that the numerous shipments now making will considerably reduce the stock on hand here.—*National Adv.*

March 31.—We have to note a decline of a shilling or two in prices since in our last; but as purchases are wholly confined to orders for immediate shipment, and the stock of consumers throughout this country being very limited, it is considered that prices cannot recede much farther. It is believed that, ere long, an advance may be looked for, should money resume the ordinary channels.—*National.*

**HAVE,** March 30.—**Lead.**—A parcel of 1800 pigs Missouri, expected by the Brunswick, from New Orleans, found buyers at 54f. per 100kil., duty paid.

This depression in iron will not continue long.—The great and increasing demand for ship building in England, in addition to the sure demand for railways, not only in England, but in all Europe, will

keep up the price, at least for a time, until a large increase of manufactories can be, as they surely will be, established. The settlement of the Oregon question, or in other words, the dispersion of the clouds which overspread that bone of contention, will give new life to business and to railroad operations.

**The Iron Trade in France.**—Casting metal has experienced a slight decline during the last week, which has caused several important transactions to have been entered into. The following are the quotations of cast metal delivered at St. Dizier, viz: plate metal and hearths, £9; pipes, £9 12s. 6d.; water and gas pipes of 65 millimetres to 162, from £11 4s. 2d. to £11 8s. 4d.; do, from 189 to 324, from £11 to £11 4s. 2d.; other descriptions of metal, for various purposes, for the making of cooking and other utensils, vary from £6 8s. 4d. to £6 12s. 8d.; and for mechanical purposes from £15 4s. 2d. to £20. The iron manufactory of Couillet and Marcinelle, the principal ones of the whole of Hainaut, have eight high furnaces—of these, four are in full blast, and the other four inactive, but one or two of them will soon be burning, as this company have received considerable contracts for rails for the interior.—The company or society of Chatelineau have seven high furnaces, but at present only two are in full blast. At Monceau-sur-Sambre, out of the four high furnaces, there are three at work. The two high furnaces of the iron factory of Hourpes are constantly lighted—the same with the two belonging to M. de Dorlodot, at Bouffiaulx and Acoz; that of the company of la Providence, and that of M. Dupont, at Fayt. At Montignies, there is one in full blast, and one not. That of Hanches is still extinguished. Therefore, out of 28 high furnaces, which exist in the basin of Charleroi, there are, at the present moment, 16 in full work, and 12 inactive; but there is very little doubt that several of the latter will soon be placed in full blast.

**Improvements in the Construction of Railways.**—**SIR:** I notice in your Journal of last Saturday, a letter on the subject of Greenhow's geometrical railway, signed "Robert Mushet," which concludes with the following remarks: "Substitute concrete for ballast as a basis for the longitudinal sleepers, and adopt cast iron sleepers instead of the present Kyranized humbug, for the support of the wrought iron rails, imbedding the rails themselves in grooves left for that purpose in the cast iron sleepers, and retaining them in these grooves by means of lead or iron cement, which would be far cheaper; and then, with round rail surfaces, and hollow wheel tyres, a degree of safety will be attained, which at present is unknown." Some months ago, a patent was sealed for improvements in "railway chair and rails," which will be specified in a few days, that entirely coincides with the views of your correspondent, Mr. Mushet.—*London Mining Journal.*

**RAILWAYS.**—The Liverpool Journal gives a list of 42 railways already rejected by the standing orders committee of the House of Commons, with an aggregate capital on paper of £41,396,000, on which deposits had been made to the amount of £2,714,500. These lines are virtually defunct. And it was supposed many others would share the same fate.

**The Great Western Steamship Company.**—From the annual report of this company, it appears that the receipts for the Great Western had amounted to £35,914 10s. 3d., and the expenditures, including repairs, to £23,484 10s. 6d., leaving a profit of £12,431 19s. 9d. The receipts of the Great Britain from visitors and passage money from Bristol to London, Plymouth, Ireland, and Liverpool, amounted to £9,690 17s. 1d. The expenditure on trial trips and voyages, etc., amounted to \$4,437, leaving a surplus of £5,253 16s. 9d.

The expenses on two voyages to New York amounted (including insurance, etc.) to £13,573 12s. 7d., and the receipts to only £9,198 7s. The small receipt was to be accounted for from the fact of the first voyage being an experimental one, and the second having been in consequence of the accident to the screw, prolonged beyond the advertised day of sailing. In reference to this ship, the directors have received a most satisfactory report from the engineers.

**RIGHT OF WAY BILL.**—BALTIMORE AND OHIO RAILROAD.—The Baltimore and Ohio railroad bill is a law, the governor having informed both houses that it had received his approval and signature.

We cannot say that we are at all pleased with the result of this measure; and we predict that some of those who have opposed the passage of the bill giving the right of way will have cause yet to regret their course.

The governor vetoed a supplement to the act granting transporting powers to the Schuylkill navigation company.

The house passed the following bill finally:

A supplement to the act for the relief of the Cumberland Valley railroad company.

**CENTRAL, PENNSYLVANIA, RAILROAD.**—The legislature of Pennsylvania passed the bill chartering the Central railroad from Harrisburgh to Pittsburgh. We have not seen a copy of the act, but trust that it is liberal, in proportion to its importance, and that its location will be made upon correct principles—that is, over the best route, without regard to local or individual interests, which have marred so many railroads and canals in this country. There was a large meeting of the people of Philadelphia, on Monday evening last, at which several able speeches were made, and strong assurances given, by those who are able to make the road, that the means will be forthcoming when required, and we presume the citizens of Pittsburgh will hold them to their promises.

**New York Legislature.**

IN ASSEMBLY, April 23.

**Third reading of Bills.**

In relation to railways. [This is the reform bill of the railroad committee.]

Mr. Hall moved to commit this and Mr. Worden's bill on the same subject to a select committee of one from each Senate District. Agreed to.

To provide for the construction of a railroad from Albany to Cohoes and Waterford.

Mr. Hayner opposed the bill on the ground of objections to some of the provisions contained in it, and Mr. Harris replied.

The bill was passed, ayes 87; noes 12.

To revive the charter of the Utica and Susquehanna railroad company. Laid on the table for examination.

To provide for the construction of a railroad from Schenectady to the New York and Erie railroad in the county of Chenango or Broome. Passed—ayes 95, noes 4.

The House then took a recess.

ASSEMBLY, April 23—Afternoon session.

In the afternoon, the bill to incorporate the Batavia and Corning railroad company, was lost—ayes 60, noes 26. A number of private bills then passed. The House adjourned.

AMERICAN RAILROADS.																
NAMES OF RAILROADS.		Length in miles.	Cost.	Loans and debts.	Number of shares.	Paid on share	1843. Income.		Div. per cent.	1844. Income.		Div. per cent.	1845. Income.		per cent.	
							Gross.	Nett.		Gross.	Nett.		Gross.	Nett.		
Maine.	1 Portland, Saco and Portsmouth.....	50	1,200,000				89,997	47,166	7	131,404	62,172	6				
N. Ham.	2 Concord.....	35	750,000									12				
Mass.	3 Boston and Maine.....	56	1,485,461				178,745	68,499	6	233,101	86,401	6 1/2				
	4 Boston and Maine extension.....	17 1/2	455,703	unfin.												
	5 Boston and Lowell.....	26	1,863,746				277,315	144,000	8	316,909	147,615	8				
	6 Boston and Providence.....	41	1,886,135	none.	18,600	100	233,368	110,823	6	282,701	156,109	6				
	7 Boston and Worcester.....	44	2,914,078				404,141	162,000	6	428,437	195,163	7 1/2				
	8 Berkshire.....	21	250,000	not stated				17,500	7	17,737		5 1/2				
	9 Charlestown branch.....		280,260						13	34,654	13,971	5 1/2				
	10 Eastern.....	54	2,388,631				279,563	140,595	6	337,238	227,920	8				
	11 Fitchburg.....	50	1,150,000	just op'd						42,759	26,835					
	12 Nashua and Lowell.....	14 1/2	380,000				84,079		8	94,588	34,944	10				
	13 New Bedford and Taunton.....	20	430,962				50,671	24,000	6	64,998	24,000	6				
	14 Northampton and Springfield.....		172,883	unfin.												
	15 Norwich and Worcester.....	66	2,290,000	500,000	16,535	100	162,336	24,871		230,674	99,464	3				
	16 Old Colony.....		87,820	unfin.												
	17 Stoughton branch.....	4	63,075	unfin.												
	18 Taunton branch.....	11	250,000					20,000	8	96,687	20,000	8				
	19 Vermont and Massachusetts.....															
	20 West Stockbridge.....	3	41,516	200		100						4				
	21 Western, (117 miles in Mass.).....	156	7,686,202	1,686,202	30,000		573,882	294,432		753,753	439,679	3				
	22 Worcester branch to Milbury.....	3 1/2	42,000													
	23 Housatonic, (10 months.).....	74	1,244,123							150,000						
Conn.	24 Hartford and New Haven.....	38	1,100,000	100,000	10,000	100						6				
	25 Hartford and Springfield.....	25 1/2	600,000	400,000	2,000	100										
	26 Stonington, (year ending 1st Sept.).....	48	2,600,000	650,000	13,000	100	113,889			154,724	79,845					
N. York.	27 Attica and Buffalo.....	31	336,211				45,896	7,522		73,248	48,033					
	28 Auburn and Rochester.....	78	1,796,342	200,000	14,000	100	189,693	112,000		237,667	152,007	6				
	29 Auburn and Syracuse.....	26	766,657			133 1/2	86,291	27,334		96,738	52,544	6				
	30 Buffalo and Niagara.....	22	200,000		1,500											
	31 Erie, (446 miles.).....		5,000,000													
	32 Erie, opened.....	53					48,000			126,020	59,075					
	3 Harlem.....	26	2,250,000	750,000	30,000					140,685	62,399					
	3 Hudson and Berkshire.....	31	575,613			50				35,029	1,789					
	35 Long Island.....	96	1,610,221	392,340	29,846					153,456	58,996					
	36 Mohawk and Hudson.....	17	1,317,893	400,000	10,000	100	69,948	58,780		79,804	45,763					
	37 Saratoga and Schenectady.....	22	303,658				42,242	3,000	1	34,666	8,455					
	38 Schenectady and Troy.....	20 1/2	640,800				28,043			32,646	6,365					
	39 Syracuse and Utica.....	53	1,115,897	none.	16,000	62 1/2	163,701	72,000		192,061	120,992	8				
	40 Tonawanda.....	43	727,332				76,227			114,177	75,865	5				
	41 Troy and Greenbush.....	6	180,000													
	42 Troy and Saratoga.....	25	475,801				44,325	21,000		38,502	9,971	2 1/2				
N. Jersey	43 Utica and Schenectady.....	78	2,168,165	none.	20,000	100	277,164	180,000	9	331,932	199,094	8				
	44 Camden and Amboy.....	61	3,200,000				682,832	383,880		784,191	404,956					
	45 Elizabethtown and Somerville.....	26	500,000													
	46 New Jersey.....	34	2,000,000													
	47 Paterson.....	16	500,000									6				
Penn.	48 Beaver Meadow.....	26	1,000,000													
	49 Cumberland Valley.....	46	1,250,000													
	50 Harrisburg and Lancaster.....	36	860,000	645,929									77,538	9,988		
	51 Hazleton branch.....	10	120,000													
	52 Little Schuylkill.....	29	900,000													
	53 Blossburg and Corning.....	40	600,000													
	54 Mauch Chunk.....	9	100,000													
	55 Buck Mountain.....	4	72,000													
	56 Minehill and Schuylkill Haven.....	19 1/2	396,117	25,000	7,019	50			12			12				
	57 Norristown.....	20	800,000													
	58 Philadelphia and Trenton.....	30	400,000													
	59 Pottsville and Danville.....	29 1/2	1,500,000													
	60 Reading.....	94	9,457,570	7,447,570	40,200	50				597,613	343,511					
	61 Schuylkill valley.....	10	1,000,000													
	62 Williamsport and Elmira.....	25	400,000				20,000									
	63 Philadelphia and Baltimore.....	93	4,400,000				43,043	200,000			210,000					
Delaw're	64 Frenchtown.....	16	600,000													
Maryl'd	65 Baltimore and Ohio, (1st Oct.).....	188	7,742,410	1,153,709			575,235	279,402		658,620	346,946		738,603	374,762	3	
	66 Baltimore and Washington.....	38	1,800,000				177,227	71,691		212,129	104,529		208,813	95,094	6	
	67 Baltimore and Susquehanna.....	58	3,000,000													
	68 Wrightsville, York and Gettysburg.....	12 1/2	500,000													
Virginia	69 Greensville and Roanoke.....	18	284,433	37,544	2,000	100				25,368	6,074	3				
	70 Petersburg.....	63	969,880	63,000	7,690	100				122,871	72,898	6				
	71 Portsmouth and Roanoke.....	78 1/2	1,454,171													
	72 Richmond, Fredericks'g and Potomac.....	76	800,000							185,243	85,688					
	73 Richmond and Petersburg.....	22 1/2	700,000													
	74 Winchester and Potomac.....	32	500,000													
N. Car.	75 Raleigh and Gaston.....	84 1/2	1,360,000													
	76 Wilmington and Raleigh.....	161	1,800,000									5				
S. Car.	77 South Carolina.....	136														
	78 Columbia.....	66	5,671,452		34,410	75	201,464	77,456		532,871	140,196					
Georgia	79 Central.....	190 1/2	2,581,723	0	20,510	100	227,532	93,190		328,425	180,704					
	80 Georgia.....	147 1/2	2,650,000				248,026	158,207		248,096	147,523					
	81 Montgomery and West Point.....	89	500,000	170,000		100				35,000	15,000					
Kent'ky	82 Lexington and Ohio.....	40	450,000													
Ohio.	83 Little Miami.....	40	400,000													
	84 Mad river.....	40	152,000													
Indiana.	85 Madison and Indianapolis.....	56	212,000	50,000			22,110	8,639	8	39,031	10,065	9 1/2	24,984	3,280		
Canada	86 Champlain and St. Lawrence.....	15						12,000		58,000	24,000					



Correspondents will oblige us by sending in their communications by Tuesday morning at latest.

## PRINCIPAL CONTENTS.

The Gauge Question.....	276
Iron Ship Building.....	276
The Iron Trade.....	277
Projected Communication across the Isthmus of Panama.....	278
Chesapeake and Ohio Canal.....	278
The Jamaica (W. I.) Railway.....	278
Western and Atlantic Railway, Ga.....	281
Railroads in Ohio.....	281
Foreign Correspondence.....	282
Montgomery (Ala.) and West Point Railway.....	283
Railway Passenger Trains leaving Boston daily, except Sundays.....	284
Mansfield and Sandusky (O.) Railroad.....	284
Cleveland and Pittsburg Railway.....	285
Break in the Erie Canal.....	285

## AMERICAN RAILROAD JOURNAL.

PUBLISHED BY D. K. MINOR, 23 Chambers street, N. Y.

Saturday, May 2, 1846.

## Western and Atlantic railroad, Georgia.

The following extract from a letter, dated Atlanta, Ga., April 16, '46, and the notice accompanying it, contains information very useful to those who desire to reach the interior of Georgia, Tennessee, or Alabama. The fact stated in the letter, that the postmaster general has refused to put the mail upon this road, deserves the attention of the business community. Why is it that this officer refuses to give the people the advantage, in the mail service, of this important road of 80 miles? Can any one answer us? It appears to us that a more liberal, or rather a more just, course should be adopted by the department towards railroad companies—pay them in proportion to the service rendered—allow them a fair compensation for their increase of speed, and greater regularity of delivery—that is all they ask.

"I send you, herewith, says the writer, an advertisement of this road, which with that of J. Edgar Thomson, for the Georgia road, will give all the necessary information for travellers who desire to pass over and beyond these roads. The South Carolina railroad of 136 miles, the Georgia railroad of 172 miles, and the Western and Atlantic railroad of 80 miles, form a continuous line of 388 miles from Charleston to the interior of Georgia—one of the most important lines for freight, as well as travel, now in the Union. The Western and Atlantic railroad is owned exclusively by the state of Georgia, having no private stockholders. It will be extended 5 miles more in a few months, and will probably reach Cross Plains 100 miles from its commencement by the end of the year. More than \$3,000,000 have been expended by the state, on this work, and it is destined to reach Chattanooga on the Tennessee river, 140 miles. At this place, (Atlanta) a junction is formed with the Georgia railroad. At the end of this year there will be another line connecting this point with the seaboard, viz: the Macon and Western railroad, of 101 miles long, and the Central railroad, 190 miles, and thus forming another continuous line at the end of this year of 376 miles.

"There is an interesting fact connected with the Western and Atlantic railroad. The postmaster general has refused to put the mail on it, and passengers from the northern and eastern cities can reach all the places mentioned in my advertisement ahead of the mail."

The following is the notice referred to:

The Western and Atlantic Railroad.—This road is now in operation to Oothcaloga, a distance of 80 miles, and connects daily (Sundays excepted) with the Georgia railroad.

From Kingston, on this road, there is a tri-weekly line of stages, which leave on the arrival of the cars, on Tuesday, Thursday and Saturday, for Warrenton, Huntsville, Decatur and Tuscumbia, Alabama, and Memphis, Tennessee.

On the same days, the stages leave Oothcaloga for Chattanooga, Jasper, Murfreesborough, Knoxville and Nashville, Tennessee.

This is the most expeditious route from the east to any of these places.

CHAS. F. M. GARNETT,  
Chief Engineer.

Atlanta, Georgia, April 16th, 1846.

## Railroads in Ohio.

We have received the following reply, to a letter of inquiry on the subject of railroads, in Ohio, from an intelligent gentleman, and warm friend of the cause, residing in Cleveland. His letter is accompanied by a letter sheet pen and ink map of the state, upon which he has very accurately sketched the canals and railroads, and which we should like exceedingly to give to our readers with his description, remarks, and views, but cannot, though we are greatly obliged to him for it.

Few people indeed are aware of, or can realize, the extent of the Ohio canals. No state in the Union has done as much in the construction of canals, in proportion to its resources, or population, as Ohio. We shall give a list and description of them hereafter, but, as it is truly remarked by our correspondent, when speaking of canals as a means of communication, "they are far behind the spirit of the age," and the people of Ohio must now adopt the more recent and more efficient system of railroads, if they would realize the full benefits of their unparalleled position. The views of the writer in relation to the advantages of the two routes, to Sandusky or to Columbus, are undoubtedly correct so far as Cleveland, or the immediate interests of those sections of the state through which the roads will pass, are concerned. A railroad to Columbus will doubtless benefit Cleveland more, and a larger number of the population of Ohio, than a road to Sandusky, at the present time; and it is therefore much more likely to be built, but it occurred to us, that by directing the energies of the people of that region to those parts of the great western line, which must, at no distant day, connect New York and Chicago and Chicago and the West, more would be effected in the way of retaining the business of the west, and south of the line to Chicago, than by the line to Columbus, which would leave all Michigan open to, and indeed almost connected with the line through Canada; by which connections and associations will be found difficult to be broken or resisted, when this direct western line shall, as it must, be completed. We are quite convinced, however, that, under the circumstances, it will be easier to construct the road to Columbus than to Sandusky, because it will connect the two principal commercial cities with the political capital of the state, and pass through a region of country, the way business of which alone, in a few years, will support the road well; yet we are very desirous to learn that early measures will be taken to construct a road in the direction of Chicago, the precise route we do not pretend to indicate, but a road which shall be eventually connected with the New York and Erie at one end, and Mr. Whitney's Oregon road, when built, at the other, forming in a measure a base line into which all the roads across the states, from Southwesterly to Northeasterly, will pour their rich freights, as well as the mighty west.

The writer says under date of Cleveland, April 11:

Sir—Your favor of the 14th ult. is received, and I hasten to reply. To make myself the better understood, I have sketched a map of the internal improvements and navigable waters of Ohio, which, though not strictly correct in detail, is nearly so, at least sufficiently correct for my present purpose. On the east, you will perceive, we are tolerably well supplied with the means of transportation by the Ohio river and the Ohio canal and its branches, on the north by the Wabash, and Erie canal, and lake Erie, on the west by the Junction and Miami canals, and on the south by the Ohio river.—Although these modes of conveyances are far behind the spirit of the age, they are far better than nothing; our state is yet in its infancy, and they must answer the purpose until we have become old and rich enough, to supply their places by time and space annihilating railways; these we have already commenced, they are represented upon the map by the full drawn red lines. The tier of counties, of which Sandusky, Tiffin, Finley, Kenton, Bellfontain, Urbana, Springfield, Xenia, Lebanon, and Cincinnati are the county towns, are supplied by the Mad river and Little Miami roads; and Richland county and a part of Huron by the Mansfield and Sandusky road. These roads, it is true, are not yet completed, yet there is no doubt but that they soon will be; the first, however, before it can do a heavy business, and do it with dispatch, must be rebuilt, the latter will be finished its entire length in the course of next month, and is a good road in general and capable of sustaining an average speed of 20 miles an hour. Having stated what we have already done, I will proceed to state what we have tried to do. The "Ohio railroad" was commenced about 1838, and after nearly completing the superstructure from Manhattan to Huron, 60 miles, the company failed, and almost the entire original outlay is a dead loss, even though the work should be resumed to-morrow. The superstructure is laid upon piles standing, from 6 inches to 15 feet above the surface and already considerably decayed; a very large portion of the grading was to be embankment, none of which has been done. The superstructure was laid for a seven foot track, (which no one would think of preserving, under present circumstances,) and its removal would cost as much as the small amount of excavation which has been done; the items of clearing, right of way and a part of the bridging are still worth something if the same location should be preserved, the policy of which is at least doubtful. For that road I felt a deep interest, always thought it an important link in the great chain between the east and west, and though my efforts were feeble, I fought for it two years and bled too. If Cleveland had taken the interest, in proportion to her power, that her little neighbor Ohio city did, or had made the same exertion that she is now making for the Cleveland and Columbus road, I have not the least doubt but that the iron horse would have this day been whirling from here



to Detroit, and its success would have had so much influence upon works to the east and west of it, that the chain between New York and Chicago would have already been completed. Cleveland had been so well fed, at the state and federal cribs, that she felt secure in her commercial prosperity, and was only aroused from her lethargy, when the Maumee canal on the west and the Erie extension canal on the east began to make inroads into her trade. She now sees the Sandusky improvements, and the Canada improvements, threatening to take away her travel, and some of her sons more far-seeing, or visionary, as you may be pleased to style it, than others, see her influence still more circumscribed by the extension of the Baltimore and Ohio road, and Pennsylvania improvements, to Mansfield and onward to the Pacific ocean. But I am running wild with my speculations; I only intended to explain to you why I consider it of more importance to Cleveland, of more importance to the state, and of more importance to the road itself, to connect Cleveland with Columbus than with Sandusky at this time. As regards the present means of communication between the several points, Cleveland has good steamboat communication with Sandusky, eight or nine months in the year, in the shortest possible distance; and canal boat communication with Columbus eight months, at a distance exceeding the railroad route by more than 50 per cent. As regards the country through which the two routes pass, the Sandusky passes through Charleston, Vermillion, and Huron to Sandusky, at all of which points the present facilities for shipping produce are nearly as good as at Cleveland, and I believe the freights are in fact the same at each to and from Buffalo, and as it would require one additional re-shipment for all property destined for the lake trade to transport it upon the railroad, very little could be expected to take that mode of conveyance. Not so the route to Columbus; for the counties of which Medina, Wooster, Ashland, Millersburgh, Bucyrus, Marion, Delaware, Mt. Vernon, Marysville, and Columbus are the county towns, are destitute of all means of transportation save by wagons upon common, or rather uncommonly bad roads. Columbus, it is true, can send her produce to Cleveland by canal, but you know well how to appreciate the difference between 232 miles by canal and 140 or 150 by railroad!

This region is second to none in the state in productiveness, and I leave it for you to judge how much of its trade would be secured to a good railway passing through Mansfield, with the branches to Wooster, Millersburgh, Mt. Vernon, and Marion. The road from Columbus to Xenia or Springfield is located, and I believe the full amount of stock is subscribed, so that it is safe to consider that the chain will be complete from Cleveland to Cincinnati, as soon as it can be built from Cleveland to Columbus. Besides these reasons, the failure of the "Ohio railroad co.," has affected the pockets of many and created a prejudice against

that route that it will be difficult to overcome, until the New York and Erie shall be completed to Dunkirk. These are some of the considerations that have led me to espouse the cause of the "Cleveland and Columbus line," and to believe that it is the true policy of Cleveland to exert herself to the utmost to complete it immediately. One good paying road once built, and the system will be extended without difficulty. I may be wrong in my conclusions, we are all apt to place too much weight upon arguments in favor of the cause we espouse, and too little upon those against it, if I am wrong in this case I shall esteem it a favor in you to put me right.

You will perceive a broken red line drawn through Elyria, Norwalk, Bellevue, Lower Sandusky, and Napoleon. This route I would prefer to the route through Sandusky for the great east and west chain; first, because it would come less into competition with the lake, and second, because it would secure a heavier way business. This road I hope soon to see built, as well as the Cleveland and Columbus road, and to see both built upon the broad gauge of the New York and Erie road. The Canada road will be built; and more, it will secure a large share of the Michigan and northwest trade, notwithstanding all our efforts to prevent it, and I do not think it worth while to waste our energies in the attempt, but let us beware lest she encroach upon the far west and the southwest also.

Excuse me for spinning out this communication to such length, for the subject is so vast, and its influences so complicated, that we become lost in attempting to trace it through the future. Respectfully yours,

J. H. SARGEANT.

#### Foreign Correspondence.

33 Rue Richer, Paris, April 1, 1846.

My dear Sir—In the midst of a great pressure of business, I seize the first leisure moment I have to answer the call, made in your Journal of January 10th, respecting the preservation of timber.

Various experiments for the preservation of timber have been made in France, but none on a scale sufficiently large, and during a time long enough, to test properly the practical merit of the proposed process. The Kyan, Moll, Briant, Payne, Boucherie, and Mergary's plans, with as many other varieties of process, have been tried; they all answer well enough as physical experimentations, in the possibility of acting on the fibres of the wood to which they were separately applied, but none are practical enough to compensate for extra expenses incurred. In other words, these processes are not simple enough, but much too expensive to be generally adopted; the consequence has been that, on most of the railroads now constructed, oak sleepers have been used in their natural state. These are generally of large dimensions. In Belgium, essays have been made of various plans of preserving timber for these four or five years, none have given satisfaction, or have proved so much superior as to warrant the expediency of being generally adopted; oak sleepers are now generally adopted, but of smaller dimensions than those used in France.

The well known way of carbonizing timber previous to its being laid on or in the ground, together

with proper care in boring or cutting for the fixing of the chairs and rails, have proved as yet the very best and most practical plan of keeping timber sound for a stated time, say ten or twelve years. To arrive at this result, great care must be had to fell timber in proper season; the timber employed for sleepers must be free of all flaws, rot, or other defects; the sap must be completely separated; particular care must be had not to cause any splitting when boring holes for fixing the chairs, the top part of the sleepers should be so disposed as to turn out the water, and the under part laying on the ground slightly hollowed, so as press on the ground by its two extremities.

In France, the sleepers have generally the following dimensions: length 2m. 50c. width 25c. thickness 12c5. In Germany, they are indiscriminately pine, white-wood and oak sleepers, but particularly pine timber. No artificial means of preserving timber is employed; timber in that country being very cheap, they calculate on renewing every seven years.

I should not fail mentioning another mode of preserving timber, practised in England, under the name of marine glue, and used chiefly for the timber employed in the construction of floating breakwaters. This English company, patented also in France, has had executed for the French government, the last year, a specimen of the invention in the formation of a ship shelter at the Sciota on the Mediterranean; so far the application of this substance to break-water has proved satisfactory. The same company offers its marine glue as a means of preserving sleepers on railroads; but I have not heard of any experiment being made.

Railway share speculation is still here the mania of the day, and much is done at the exchange on their value, although it is generally considered that the French market is overmuch gorged with railway stock.

Shares in forges and furnaces are in better demand, and command at this time high prices; some shares have run up to four times their par value.

The mania for railway speculations has not abated in France, notwithstanding the adjudication of the great northern and Lyons roads; as many companies have formed anew to bid for the concession of Lyons and Avignon and the Bordeaux and Cette railroads, not speaking of smaller lines which have respectively called out several competing companies. There are at this moment 23 companies organized with a capital of 110 millions of francs for the Lyons and Avignon railroad; it is reckoned that should they come to an understanding, previous to the adjudication day which is not yet made known by the government, each company, or rather, each stockholder may hope to obtain 5 per cent. of the shares subscribed.

Nothing new about the atmospheric system of railway; some practical partial experimentations will be made near Paris this season, I will endeavor to inform you of its result.

We have had to deplore two serious accidents of late on our railroads; one on the Lyons and St. Etienne, the other on the Rouen railroad. Several lives have been lost, and several persons seriously injured. These accidents have originated from the failure in the police of the roads, and in the absence of proper means of stopping a train.

While on this subject, I will mention to you that I have lately experimented on the Versailles railroad which has great ascents and heavy grades, a new system of breaks patented by M. M. Noseda & Travanet, of which I have obtained excellent results,



it being of powerful effect, requiring but a very small effort, acting in either way by means of a gear, and calling to its aid the rotary motion of the wheels or shafts at will. On that account this break is called *self acting (auto moteur)*. The cost of the break is 250 francs instead of 500 francs, that of the Birmingham breaks. Yours most truly,

LE MAJOR POUSSIN.

#### Montgomery, (Ala.) and West Point Railroad.

In reply to our inquiries in relation to this and other railroads in Alabama, and their probable connections, we have received the following interesting communication from L. P. Grant, Esq., a gentleman who has been long devoted to the advancement of the system, in the south, of which he speaks with so much familiarity. It is hardly necessary for us, yet we must not lose the opportunity, to say that we are greatly obliged to him for this evidence of his desire to aid the Journal. It is the way in which we like to obtain information in relation to existing and proposed railroads in the different states, as it enables us to speak with confidence in relation to their present condition, if not in all cases of their further progress and future prospects.

We shall be greatly obliged to other gentlemen for similar favors, in relation to other sections of the Union.

The writer says:

You ask, "What are the prospects of an extension of our road?"

We have 40 miles in operation, from Montgomery to Chehaw, and 7 miles, extending from Chehaw to Moore's, graded and bridged. This portion, for which the iron spikes, etc., are provided and part of the superstructure laid, will be completed and opened about the first of June. From Moore's station to West Point—a distance of 42 miles—about 10 miles of graduation was done previous to the bankruptcy of the old company; but this work was done on the West Point end, and is, of course, of no avail at present. My estimate of the cost of road complete from Moore's station to West Point, is \$340,000.—The company are now negotiating for a loan of part of the amount required, which, if obtained, will enable us to push on vigorously towards the desired goal.

The importance to the company and the public at large, of the early completion of this road, is so plainly apparent that I need hardly expatiate upon it. A link in the great chain connecting the Atlantic cities with those of the Gulf, it will always be the thoroughfare of a large travel and the route of the great mail. The line, for its entire length, passes through a good cotton-growing region, and terminates on the western border of one of the most populous and productive counties in Georgia—insuring a large local travel and a profitable freighting business.

We have now five engines, of the following make and class:

- 1 Baldwin & Whitney—2d class improved, six wheeled, connected.
- 1 Baldwin & Whitney—3d class improved, six wheeled, connected.
- 1 Burr's—3d class, six wheeled, single drivers.
- 1 Brook's—3d class, six wheeled, single drivers.
- 1 Rodgers, Ketchum & Grosvenor—2d class, six wheeled, single drivers.

Rates of freight on forty miles:

75 cents per bale of cotton.

50 " barrel.

8 " cubic foot measurement goods.

Rate of passage: 5½ cents per mile.

Present schedule—Passenger trains:

Leave Montgomery..... 8 A. M.

Arrive at Chehaw..... 11 " "

Leave Chehaw..... 12½ P. M.

Arrive at Montgomery..... 4 " "

The express mail, Georgia railroad, and South Carolina railroad lines (three daily) of stages—owned by Messrs. Peters, Beman and Ellsworth—run between Chehaw and Atlanta, the head of the Georgia railroad—via West Point, Lagrange and Newman—distance 136 miles.

Stage schedule:

Leave Chehaw..... 12 M.

Arrive at Atlanta..... 3 P. M. next day.

Leave Atlanta..... 9 A. M.

Arrive at Chehaw..... 12 M. next day.

The Central stage line (one daily) runs between Chehaw and Macon, Ga., via Columbus. This line is owned by Messrs. Mastain, Mott & Griffin:

Leaves and arrives at Chehaw at 12 M. Time of leaving and arriving at Macon not known. Distance 145 miles.

From Montgomery, the great mail is transported to Stockton (the head of tide on Mobile bay) in covered wagons during the winter months, and in four-horse coaches during the summer. Distance 160 miles. Wade Allen, contractor.

Leave Montgomery, 6 P. M.; arrive at Montgomery, 6 A. M.; time from Montgomery to Mobile, about 40 hours; exact schedule for arriving and leaving Mobile not known.

A tri-weekly line of stages run between Montgomery and Tuscaloosa. Exact schedule not known.

No stages run in connection with our road from any way point.

The hotels of Montgomery are:

The Montgomery Hall, by Wilson & Wyman.

The City Hotel,..... by Dr. Clopton.

The Central Hotel,.... by Mr. Staples.

All good houses and well sustained.

At Chehaw, there are two houses—both comfortable.

If you will now take up a map of Alabama, I will endeavor to trace out for you the *old* projected improvements in the state, and those more recently chartered. The only railroads in operation in the state, are the Decatur and Tusculumbia and the Montgomery and West Point. Of the old projected improvements, not in operation, the Selma and Tennessee and the Pensacola and Montgomery, are the most important. The former was graded about 27 miles at the time of its suspension. The latter was graded about 15 miles out from Pensacola when the enterprise was suspended. Its completion is still looked forward to with much certainty by some.

The Selma and Tennessee road was designed to connect the Alabama river at Selma with the Tennessee at Gunter's landing. Its further prosecution for many years to come, is considered doubtful.

A railroad was commenced and nearly graded from Marion to Cahawba—length, 27 miles. This shared the fate of the more important. Another, styled the Wetumpka and Coosa railroad, designed, I believe, to connect Wetumpka with the navigable waters of the Coosa, above the "Ten Islands," was graded for a considerable distance, but shortly abandoned. The Mobile and Cedar Point road was graded for a portion of the distance, and the track laid on a few miles, but subsequently abandoned, and the iron taken up.

Alabama has truly been unfortunate in her improvements. Commenced in the piping times of '35 and '36—some of which, had they been completed, would have been of *real* and others of *doubtful* utility to the stockholders—they shared one common fate of suspension and bankruptcy.

The more recently projected improvements are as follows:

*The Coosa and Tennessee Road.*—To commence at the mouth of Wills creek, on the Coosa river, and,

crossing the Sand mountain, terminate at Gunter's landing, on the Tennessee.

*The South Western Railroad.*—To commence at Montgomery, and pursuing nearly a due west course to the western line of the state, connect with the extension of the Vicksburg, Jackson and Brandon road.

*The Southern Railroad.*—To commence on the Chattahoochee river at Gerard, (opposite Columbus, Ga.) and terminate at some point on the Alabama river, or connect with the Montgomery and West Point road.

Charters for the two last mentioned were obtained at the last session of the legislature. The charter of the Coosa and Tennessee road was obtained at a previous session.

The Coosa and Tennessee railroad is designed to connect the Tennessee river at Tusculumbia, below the Muscle shoals, with Charleston and Savannah, by railroads and steamboat navigation. It would seem at a first glance at the map, to be an important and desirable link; but when compared with the upper route, via Chattanooga, it appears to me to be saddled with many disadvantages. The point at which these lines diverge going westwardly, is Kingston, (the nearest point on the Western and Atlantic railroad to Rome, on the Coosa,) and the point at which they again unite is at Gunter's landing, on the Tennessee.

The upper route will consist of the extension of the Western and Atlantic railroad about 68 miles from Kingston to Chattanooga, about 20 miles of which is constructed and in operation;—maximum grades 33 feet per mile. Thence by steamboat about 130 miles, down the Tennessee to Gunter's landing. On this route but one transshipment would occur between Kingston and the head of the Muscle shoals.

The lower route would consist of a branch road of 17 miles, from Kingston to Rome; thence steamboat down the Coosa, about 120 miles, to the mouth of Wills creek; thence railroad, 40 miles, to Gunter's landing, with a maximum grade of 80 feet per mile. On this route, three transshipments would occur between Kingston and the head of the Muscle shoals. The distance in favor of the lower route is about 25 miles.

The only bad feature in the upper route is found in the obstructions occurring in the Tennessee, a few miles below Chattanooga. I have conversed with intelligent men intimately acquainted with the nature and extent of those obstructions, who coincide with Col. S. H. Long, that a single dam and lockage would render the navigation good and safe.

The trade of the Tennessee valley will be well accommodated with one line. The upper line is now completed to the Oostanaula, and is in a state of progression. The completion of this road to Chattanooga will probably be anticipated by the extension to Nashville on the north, and by a road from Tusculumbia to Memphis on the west, connecting the Atlantic ports of Charleston and Savannah with the Tennessee, Cumberland and Mississippi rivers. Distance from Charleston to Memphis by railroads and steamboat navigation, would then be about 640 miles of the former and 130 of the latter. From the same to Nashville by railroad entire, would be about 575 miles. Distance from Savannah to either of these points would be 16 miles less than from Charleston.

Of the Georgia improvements, only two have been completed—the Georgia railroad, 17¼ miles from Augusta to Atlanta, and the Central railroad from Savannah to Macon, 190¼ miles.

The Macon and Western railroad from Macon to Atlanta, 101 miles, is now being pushed rapidly,

and will be completed in all of the ensuing summer.

The Western and Atlantic railroad, before mentioned, will be extended to Cross Plains, 100 miles from Atlanta, in all this year, leaving about 35 miles to complete to Chattanooga.

At the last session of the Georgia legislature, the following new charters were granted:

A road from Macon to Columbus.

A branch from the Macon and Western road to Columbus, diverging about 40 miles above Macon.

A branch from the same to West Point, diverging about 58 miles above Macon. The former branch to be built before the latter shall be commenced.

The most important charter asked for was defeated by the combined efforts of Savannah, Macon and Columbus, viz: from Atlanta to West Point. The construction of this link is more imperatively called for than any other in the southern country. It would, with the completion of the Montgomery and West Point road, perfect the great mail route from Charleston to Montgomery. It would connect the Alabama and Tennessee rivers by a continuous line of railroad; and by a short branch of thirty miles, from West Point to Columbus, would give that city railroad facilities, and—what she so much desires—the most direct connection with upper Georgia and Tennessee, without injury to her present cotton trade, which would be most disastrously affected by a direct connection with Macon.

#### Railroad Passenger Trains Leaving Boston Daily, Except Sundays.

We copy the annexed list of departures from Boston by railroad and steamboat, from the Traveller. It will be found exceedingly useful to travellers: and interesting to many, who like to know how such matters progress, even though they do not travel much. For the convenience of our readers we shall keep it standing, and endeavor to correct it as changes are made.

#### PASSENGER TRAINS LEAVE BOSTON DAILY.

For	Depot.	Hours.
Albany.....	Worcester.....	7½ a.m., 7½ p.m.
Andover.....	Me. Extension.....	7½, 11½ a.m. 2½, 4½, 6 p.m.
Concord, Ms.	Charlestown.....	7 a.m. 1½ p.m.
Concord, N.H.	Lowell.....	7, 11 a.m. 5½ p.m.
Dedham.....	Providence.....	8 a.m. 12½, 3½, 6½ p.m.
Dover.....	Me. Extension.....	7½ a.m. 2½, 4½ p.m.
Fitchburg.....	Charlestown.....	7 a.m. 1½, 5 p.m.
Fresh Pond.....	".....	6, 10 a.m. 1½, 4½ p.m.
Fall River.....	Providence.....	8½ a.m. 3½ p.m.
Hartford.....	Worcester.....	7½ a.m. 4 p.m.
Haverhill.....	Me. Extension.....	7½, 11½ a.m. 2½, 4½, 6 p.m.
Lowell.....	Lowell.....	7, 9, 11 a.m. 2½, 5½ p.m.
Millbury.....	Worcester.....	7½ a.m. 4 p.m.
Nashua.....	Lowell.....	7, 11 a.m. 5½ p.m.
Newburyport.....	Eastern.....	7½, 11½ a.m. 2½, 5½ p.m.
New Bedford.....	Providence.....	7½ a.m. 4½ p.m.
New Haven.....	Worcester.....	7½ a.m. 4 p.m.
Newton.....	".....	7½, 9½ a.m. 1½, 2½, 4½, 6½, 8½ p.m.
Norwich.....	".....	7½, 8½ a.m. 5 p.m.
Plymouth.....	Old Colony.....	7½ a.m. 5 p.m.
Portland.....	Eastern.....	7½ a.m. 2½ p.m.
".....	Me. Extension.....	7½ a.m. 2½ p.m.
Portsmouth.....	Eastern.....	7½ a.m. 2½, 5½ p.m.
Providence.....	Providence.....	7½ a.m. 4 and 5 p.m.
Reading.....	Me. Extension.....	7½, 9, 11½ a.m. 2½, 4½, 6, 8 p.m.
Salem.....	Eastern.....	7½, 9, 11½ a.m. 12½, 2½, 3½, 5½, 6½, 8½ p.m.
Somerset.....	".....	7½ a.m. 2½ p.m.
".....	Me. Extension.....	7½ a.m. 2½, 4½ p.m.
S. Braintree.....	Old Colony.....	7½, 10½ a.m. 2½, 5, 7 p.m.
Springfield.....	Worcester.....	7½ a.m. 4 p.m.
Stoughton.....	Providence.....	11½ a.m. 5½ p.m.
Taunton.....	".....	7½ a.m. 4½ p.m.
Worcester.....	Worcester.....	7½ a.m. 1½, 4½ p.m.
Waltham.....	Charlestown.....	7, 10 a.m. 1½, 2½, 5, 5-55 p.m.
Woburn.....	Lowell.....	8, 11½ a.m. 3, 6 p.m.

#### STEAMBOAT TRAINS FOR NEW YORK

Via	Days.	Depot.	Hours.
Norwich.....	Daily, ex. Sun.	Worcester.....	5 p.m.
Prov. & Newport.....	"	Providence.....	5 p.m.
Stonington.....	"	"	5 p.m.
Long Island.....	"	Worcester.....	8½ a.m.

#### STEAMBOAT TRAINS FOR THE EAST.

For	From	Days.	Hours.
Bangor.....	E. R. R. depot.	Tuesday.....	4½ p.m.
Bath, Gardiner.....	"	Monday.....	7½ a.m.
and Hallowell.....	"	Friday.....	4½ p.m.

These trains connect at Portland with the steamboats for the Kennebec and Penobscot.

#### STEAMBOATS LEAVE BOSTON

For	From	Days.	Hours.
Bangor.....	East. steam. wf.	Tues'd'y, Frid'y.	3 p.m.
Bath.....	East. steam. wf.	Wednesday.....	7 p.m.
Gardiner.....	East. steam. wf.	Saturday.....	5 p.m.
and Hallowell.....	End of T. wf.	Tues'd'y, Frid'y.	7 p.m.
Hal'well.....	Foster's wf.	Tuesday.....	7 p.m.
Eastport.....	East. steam. wf.	Monday.....	12 m.
St. John.....	Liverpool wf.	Daily.....	5 p.m.
Hingham.....	T. wf.	Saturday.....	5 p.m.
Gloster.....	"	Monday.....	9 a.m.
Gloster.....	"	Wednesday.....	9 a.m.
Portsmouth.....	T. wf.	Friday.....	4 p.m.
Dover.....	Central wf.	Mon. Wed. Frid.	4 p.m.

The Bangor boat stops at Portland and at all the intermediate landings on the Penobscot.

#### FREIGHT TRAINS LEAVE DAILY

From	For	At
Me. Exten. depot.	Port'd & way stat'ns.	6 a.m.
Lowell.....	Lowell.....	5½ a.m.
".....	Nashua and Concord.	2 p.m.
Worcester.....	Worc. & way stations	4½, 11½ a.m. 6 p.m.
".....	Western railroad.....	4½ a.m.
Providence.....	Prov. & way stations.	6 p.m.
".....	N. Bedford & Taunton.	6 p.m.
Charlestown.....	Fitchburg & w. stations.	9 p.m.

#### Mansfield and Sandusky, Ohio, Railroad.

The following gratifying intelligence is from the Sandusky Clarion. We should have been delighted to witness the happiness of those honest industrious hundreds on their—at least to many of them—first railroad excursion. We can imagine few more exhilarating scenes, than "a first ride on a railroad." The difference between travelling four or five miles or twenty miles an hour, is so great that it either alarms, or greatly exhilarates, those unaccustomed to such speed—and we admire the tact of the superintendent in thus making numerous early friends to the work. The Clarion says:

"Old Associations Renewed.—Twenty-four years ago, when we commenced the publication of the Clarion, the interests of this place, Oxford, Ridgefield, Peru, Greenfield and New Haven, as well as the adjoining western tier of townships, were considered, if not identical, at least as having a very near relation to each other. We have seen with regret, within a few years, the disseverance of these interests, the disunion of sentiment, an estrangement of feeling, and the diversion of our business relations into other channels; but we are now happy in being able to announce that old associations are revived, and so connected that they cannot be again broken asunder. This good work has been effected by the construction of the Mansfield and Sandusky city railroad. The track is now completed, and the cars are in daily operation upon it to Paris, 36 miles.

The citizens along the line have this week availed themselves of the invitation of Mr. Higgins, the agent and superintendent, to

take a ride, to view the road and visit our city. On Tuesday the cars came in with rising of 600 persons, principally Peruvians, with a portion of their neighbors from Greenfield and Sherman, starting from a place, we believe, on the railroad, called Pontiac, whose name we never heard before. We suppose this is one of the railroad's creations.

Next day, seven more cars were added, and about a thousand persons, as we are informed, came down from New Haven; and on Thursday, six or seven hundred came down from Paris. It will be a joyful day when we shall, by the enterprise of this company, be placed within three or four hours' ride of the wealthy and flourishing town of Mansfield, 56 miles distant. That day we suppose to be but a month hence. At the same time it is expected a conveyance from Sandusky to Columbus in one day, and by day-light, will be established, by means of stages and the railroad.

The Cleveland Herald also evinces the right feeling towards their enterprising neighbors of Sandusky. How much better such a course appears than that not unfrequently displayed between neighboring, or rival towns. We also like its hint to the people of Cleveland. It is to the point—"This is a free country"—at least in relation to the construction of railroads—or so think most of the citizens of New York. Yet they may not lose anything by "taking the hint" conveyed in the closing remarks of the Herald.

"We perceive, says the Herald, that an accommodation train and an express passenger train are to leave each end of the road daily—distance 56 miles—fare by the first named train, \$1.25; by the other, \$1.75.

From Mansfield a line of stages is to be run to Columbus, and it is intended to go through from the lake to the capital between 6 o'clock, A. M. and 7, P. M. This we think will be a difficult matter to accomplish, but the route will undoubtedly be a popular one till a better shall be substituted.

When our citizens have occasion to visit Columbus, they will find this, taking a steamboat hence to Sandusky, the most eligible channel to adopt, we presume, if the cars and stages be driven as intended.

One or more trains start daily on the Cincinnati road for Tiffin, 36 miles, and which is likely to be completed within a year to Xenia, making a continuous line to Cincinnati. Our Sandusky neighbors will then be entitled to the appellation of the Railroad City of the Lake.

A few enterprising men at Sandusky have done much to improve the town, and mean to do much more. They are entitled to great credit for it, and for the sagacity they exhibited in applying their means so judiciously. Unless other lake shore cities are up and doing, Sandusky will take precedence of them, and justly so. If we feel so secure in our present position, as to suppose all exertion unnecessary, or if we are so sleepy or stupid as to suppose that we can sustain ourselves without keeping pace with the age, we may find, when too late, the sad mistake we have made. Our land-holders may then find a very marked difference in their rent-rolls,



between a depreciation of one-third from rates now paid, or 100 per cent. advance.

This is a free country, and they can take either course they please—it is optional with them, either to halve their property or to double it. Which process would be the most agreeable, each man will judge for himself.

#### Cleveland and Pittsburg Railroad.

We have before us the report of Col. S. Dodge, engineer, on the survey and estimates of this road. As forming a connecting link between our city, the great lake trade and the West generally, in connection with the contemplated central route through our state, this road assumes a vast importance. Commencing at Cleveland, the surveyed route passes through Newburg, Bedford, Ravenna, Benton and Salem: from these it follows the summit between the forks of Little Beaver Creek, and down the valleys formed by other runs, to the Ohio, at Wellsville. The distance is nearly 97 miles, and the estimated cost, to fit the road for use, \$1,394,068 27, with a T or H rail. The highest grades are fifty feet to the mile, and the smallest curves have fifteen hundred feet radius. The route possesses every advantage of location, and offers an opportunity for the profitable investment of capital. The lake trade, which will, by this channel, be hereafter brought to Philadelphia, over the Central railroad, must be immense, and will yearly increase. It opens also a direct channel to seven thousand miles of lake and river trade, through a country unexcelled for richness and fertility by any region of the globe.—*Phil. N. American.*

#### Breach in the Erie Canal, near Bushnell's Basin.

SUPERINTENDENT'S OFFICE,  
Rochester, April 22d, 1846.

A. C. Flagg: Dear Sir—I hasten to inform you of a break in the canal, at 12 o'clock M., a few rods east of Bushnell's Basin, near the big embankment. There are some 25 or 30 rods, at a depth of about 80 feet, taken away, and as near as can be ascertained the culvert is also gone. I think it may take some eight or ten days to make the necessary repairs. I have already commenced repairs.

Very respectfully, yours,  
D. WARNER, Supt.

*The Break in the Canal.*—A very large number of hands are engaged in repairing the break at Bushnell's, and rapid progress is making. It is expected that the work will be finished, and that boats will be able to pass by Monday or Tuesday next.—*Rochester American, Saturday.*

*Opening of the Ohio Canals.*—We see it announced in the Cleveland Herald of Wednesday, that the northern end of the Ohio canal is open and ready for navigation. The Herald states that there will be a probable interruption at Winchester (some 11 miles east of Lockburn, and 34 below Newark) until the 1st of May, in consequence of the failure of the contractor to complete the locks at that place, which are in a course of being rebuilt. We are happy to assure the Herald from a conversation with the energetic acting commissioner in charge of the eastern division of the public works, that the locks at Winches-

ter will be ready to pass boats, probably by the 15th should the weather continue fine, but by the 17th or 18th without fail.

The canal is open from this point to Portsmouth, and is in improved navigable condition.

The Miami canal from near Piqua, north, has been open for some time, and near the Wabash and Erie was ready for navigation on the 10th. From Piqua south, boats will be able to pass from the 24th to the 28th of this month, in season to meet the current of business from the New York canals, which open on the 16th. The amount of work done on this canal from Dayton, south, to put it in good navigable order, has been great. It had been sadly neglected, and was very much filled up. The acting commissioner on this division has been unceasing in his exertions, and the public well understand that they are seldom misdirected.—*Ohio State Journal.*

The senate on yesterday, afternoon passed, with amendments, the bill to incorporate the Port Huron and Lake Michigan railroad company—yeas 12, nays 6.

The bill for the sale of the Southern railroad was ordered to a third reading in the house yesterday afternoon—yeas 25, nays 13.

**STEPHENS' RULING AND MECHANICAL**  
Drawing Ink, for Engineers, Artists and Designers. This article will be found superior to the best Indian ink for the above purposes. It does not smear with India rubber or wash off with water. It flows freely from the drawing pen, and never corrodes or encrusts it. It may be used on a plate or slab, with a camel's hair brush, diluting it with water, or thickening it by drying, as required. It has the advantage of being ready for immediate use.

Sold in conical-shaped bottles, convenient for using from, without any stand, at 15 cents each.

ALSO,

#### STEPHEN'S WRITING FLUIDS.

These compositions, which have so remarkably extended the use of the STEEL PEN, are brought to great perfection, being more easy to write with, more durable, and in every respect preferable to the ordinary ink. In warm climates they have become essential.

They consist of a Blue Fluid, changing into an intense Black color.

A Patent Unchangeable Blue Fluid, remaining a deep Blue color.

A Superior Blue Ink of the common character, but more fluid.

A brilliant Carmine Red, for Contrast Writing.  
A Carbonaceous Record Ink, which writes instantly black, and being proof against Chemical Agents, is most valuable in the prevention of frauds.

Also, a new kind of MARKING INK for Linen and Inkholders adapted for preserving Ink from evaporation and dust.

Sold in Bottles of various sizes, by all Stationers and Booksellers.

Be sure to ask for Stephens' Writing Fluid.

N. B.—These unchangeable Blue Fluids are Patent Articles; the public are therefore cautioned against imitations, which are infringements, to sell or use which is illegal.

#### Stephens' Select Steel Pens.

The utmost possible care having been bestowed upon the manufacture of these articles, so as to procure the highest finish, they can be confidently recommended, both for flexibility and durability.

All the above articles are prepared by Henry Stephens, the inventor, No. 54 Stamford-street, Blackfriars road, London, and sold by Booksellers and Stationers in bottles of various sizes, and may be had wholesale from the agents in Boston, New York, Philadelphia, Baltimore, Washington, Charleston, New Orleans, and St. Louis.

Mr. Wm. W. Rose, Wall-street, New York, is my general agent in the United States.



**RICH & CO'S IMPROVED PATENT SALAMANDER SAFES.**—Warranted free from dampness, as well as fire and thief proof.

Particular attention is invited to the following certificates, which speak for themselves:

TEST No. 10.

Certificate from Mr. Silas C. Field, of Vicksburg, Mississippi.

On the morning of the 14th ult., the store owned and occupied by me in this city, was, with its contents, entirely consumed by fire. My stock of goods consisted of oil, rosin, lard, pork, sugar, molasses, liquors, and other articles of a combustible nature, in the midst of which was one of Rich's Improved Patent Salamander Safes, which I purchased last October of Mr. Isaac Bridge, New Orleans, and which contained my books and papers. This safe was red hot, and did not cool sufficiently to be opened until 16 hours after it was taken from the ruins. At the expiration of that time it was unlocked, when its contents proved to be entirely uninjured, and not even discolored. I deem this test sufficient to show that the high reputation enjoyed by Rich's Safes is well merited.

S. C. FIELD.

Vicksburg, Miss., March 9th, 1846.

Certificate from Judge Bataille, of Benton, Mississippi.

In October last I purchased one of Rich's Improved Salamander Safes, which was in the fire at the burning of my law office, and several adjoining buildings in this place, on the 17th of November last, at about half-past one o'clock A. M. of that day. The building was entirely consumed; and I take pleasure in stating that my papers in said safe were preserved without injury. A receipt book which was in said safe, had the glue drawn out of its leather back by the heat, and the back broken; but the leaves of the book, and the writing thereon, were entirely uninjured; and some of the writing which was of blue ink, was also left wholly uneffaced and not in the least faded. Said safe was by the fire heated perfectly red hot, and I do not hesitate to say, that said safe is a perfect security against fire. But the safe tumbled over during the fire, and being heated red hot, the outer sheeting of the door became pressed in, and the bolts of the lock bent, so that it could not be unlocked, and I had to have it broken open.

JOHN BATAILLE.

Benton, Miss., December 27, 1845.

Still other Tests in the Great Fire of July 19, 1845.

The undersigned purchased of A. S. Martin, No. 138½ Water street, one of Rich's Improved Patent Salamander Safes, which was in our store, No. 54 Exchange place. The store was entirely consumed in the great conflagration on the morning of the 19th inst. The safe was taken from the ruins 52 hours after, and on opening it, the books and papers were found entirely uninjured by fire, and only slightly wet—the leather on some of the books was perched by the extreme heat.

(Signed.)

RICHARDS & CRONKHITE.

New York, 21st July, 1845.

One of Rich's Improved Salamander Safes, which I purchased on the 2d of June last of A. S. Marvin, 138½ Water street, agent for the manufacturer, was exposed to the most intense heat during the late dreadful conflagration. The store which I occupied, No. 46 Broad street, was entirely consumed; the safe fell from the 2d story, about 15 feet, into the cellar, and remained there 14 hours, and when found, I am told, and from its appearance afterwards, should judge that it had been heated to a red heat. On opening it, the books and papers were found not to have been touched by fire. I deem this ordeal sufficient to confirm fully the reputation that Rich's safe has already obtained for preserving its contents against all hazards.

(Signed.)

WM. BLOODGOOD.

New York, 21st July, 1845.

The above safes are finished in the neatest manner, and can be made to order at short notice, of any size and pattern, and fitted to contain plate, jewelry, etc. Prices from \$50 to \$500 each. For sale by

A. S. MARVIN, General Agent,

138½ Water st., N. Y.

Also by Isaac Bridge, 76 Magazine street, New Orleans.

Also by Lewis M. Hatch, 120 Meeting street, Charleston, S. C.

16 f.

**BOSTON AND ALBANY.—WESTERN RAILROAD.—Fare Reduced.**

1846. Spring Arrangement. 1846.

Commencing April 1st.

Passenger trains leave daily, Sundays excepted—

Boston 7½ p. m. and 4 p. m. for Albany.

Albany 6½ " and 2½ " for Boston.

Springfield 7 " and 1 " for Albany.

Springfield 7 " and 1½ " for Boston.

Boston, Albany and Troy:

Leave Boston at 7½ a. m., arrive at Springfield at 12 m., dine, leave at 1 p. m., and reach Albany at 6½ p. m.

Leave Boston at 4 p. m., arrive at Springfield at 8 p. m., lodge, leave next morning at 7, and arrive at Albany at 12½ m.

Leave Albany at 6½ a. m., arrive at Springfield at 1½ m., dine, leave at 1½ p. m., and arrive at Boston 6½ p. m.

Leave Albany at 2½ p. m., arrive at Springfield at 8½ p. m., lodge, leave next morning at 7, and arrive at Boston at 12 m.

The trains of the Troy and Greenbush railroad connect with all the above trains at Greenbush.

Fare from Boston to Albany, \$5; fare from Springfield to Boston or Albany, \$2 75.

Boston and New York, via Springfield: Passengers leaving Boston at 4 p. m., arrive in Springfield at 8 p. m., proceed directly to Hartford and New Haven, and thence by steamers to New York, arriving at 5 o'clock a. m.

For Buffalo: the trains for Buffalo leave Albany at 7½ a. m. and 7 p. m., arriving at Buffalo at 8 a. m. and 8 p. m. next day. Returning, arrive at Albany at 4 a. m. and 4 p. m.

New York and Boston, via Albany: the trains from Boston arrive at Albany in season for the 7 o'clock boats to New York. Returning, the boats, leaving New York at 5 and 7 p. m., reach Albany at 5 a. m., in ample season for the morning trains to Boston.—Steamboats also leave Albany at 7 a. m. and 5 p. m. and stop at the usual landing places upon the river.

The trains of the Springfield, Hartford and New Haven railroad, connect at Springfield, and passengers from Albany or Boston proceed directly on to Hartford and New Haven.

Montreal: through tickets to Montreal may be obtained in Boston, by which passengers may proceed to Troy, and thence by stage via Chester, Elizabeth, etc., and in the season of navigation by canal to Whitehall, and thence by the splendid steamers of Lake Champlain to St. John, via Burlington, and thence by railroad and steamers to Montreal.

The trains of the Hudson and Berkshire railroad connect at Chatham and State Line.

The Housatonic railroad connects at State Line.

The trains of the Connecticut River railroad connect at Springfield, and passengers may proceed without delay to Northampton, and thence by stage to Greenfield, Brattleboro, Bellows Falls, Hanover, Haverhill, etc.

Stages leave West Brookfield for Ware, Endfield, New Baintree and Hardwick; also leave Palmer for Three Rivers, Belchertown, Amherst, Ware and Monson; Pittsfield for North and South Adams, Williamstown, Lebanon Springs, etc.

Merchandise trains run daily (Sundays excepted) between Boston, Albany, Troy, Hudson, Northampton, Hartford, etc.

For further information apply to C. A. Read, agent, 27 State street, Boston, or to S. Witt, agent, Albany.

JAMES BARNES,  
Superintendent and Engineer.Western Railroad Office,  
Springfield, April 1, 1846. } 14 1y**Philadelphia and Columbia Railroad.**—Collector's office, Philadelphia, April 9th, 1846.—The following shows the collections at this office:

	Railway.	M. Power.	Total.
Amount as per last report.....	12,187 84	20,650 93	32,838 47
Amount month of March.....	9,014 58	7,782 27	17,796 85

Whole amt't since  
Nov. 30, 1845, ... 21,202 42 29,432 90 50,635 42  
JOHN S. CASH, Collector.

—U. S. Gaz.

**RAILROAD IRON.**—The subscriber having taken contracts for all the Railroad Iron he can manufacture at his Iron Works at Trenton, until July next, will gladly receive orders for any quantity to be delivered after that time, not exceeding thirty tons per day. Also has on hand and will make to order Bar Iron, Braziers' Rods, Wire Rods and Iron Wires of all sizes, warranted of the best quality. Also manufactures and has on hand Refined American Isinglass, warranted equal in strength to the Russian. Also on hand a constant supply of Glue, Neats' Oil, &c. &c.PETER COOPER, 17 Burling Slip.  
New York, January 23d, 1846. 1y 10**C. J. F. BINNEY,**  
**GENERAL COMMISSION MERCHANT**  
and Agent for Coal, and also Iron Manufactures, etc.No. 1 CITY WHARF, BOSTON.  
Advances made on Consignments.  
Refer to Amos Binney, Boston.  
Grant & Stone,  
Brown, Earl & Erringer, } Philadelphia.  
Weld & Seaver, Baltimore.  
December 8, 1845. 1m 50**SCRIBNER'S ENGINEERS' AND MECHANICS' Companion.** For sale at this office.  
Price \$1-50.**LARD OIL FOR MACHINERY, ETC.**—Winter pressed, cleansed from gum, and manufactured expressly for engines and machinery of all kinds, railroads, steamboats, woollen and other manufactures, and for burning in any lamp without clogging the wick. Engineers of railroads and others who have used this oil, and to whom reference can be made, give it preference over the best sperm for its durability, and not requiring to be cleaned off like that, and costing about two-thirds the price. For sale by the barrel, and samples can be sent for trial, by addressingC. J. F. BINNEY,  
Agent for the Manufacturer,  
Boston, Mass.

11 cop 1m

**ENGINEERS' AND SURVEYERS' INSTRUMENTS MADE BY EDMUND DRAPER,**  
Surviving partner of  
**STANCLIFFE & DRAPER.**No 23 Pear street, below Walnut,  
near Third, Philadelphia.**KITE'S PATENT SAFETY BEAM.****M**ESSRS. EDITORS.—As your Journal is devoted to the benefit of the public in general I feel desirous to communicate to you for publication the following circumstance of no inconsiderable importance, which occurred some few days since on the Philadelphia, Wilmington and Baltimore railroad.

On the passage of the evening train of cars from Philadelphia to this city, an axle of our large 8 wheel passenger car was broken, but from the particular plan of the construction, the accident was entirely unknown to any of the passengers, or, in fact, to the conductor himself, until the train, (as was supposed from some circumstances attending the case,) had passed several miles in advance of the place where the accident occurred, whereas had the car been constructed on the common plan the same kind of accident would unavoidably have much injured it, perhaps thrown the whole train off the track, and seriously injured, if not killed many of the passengers.

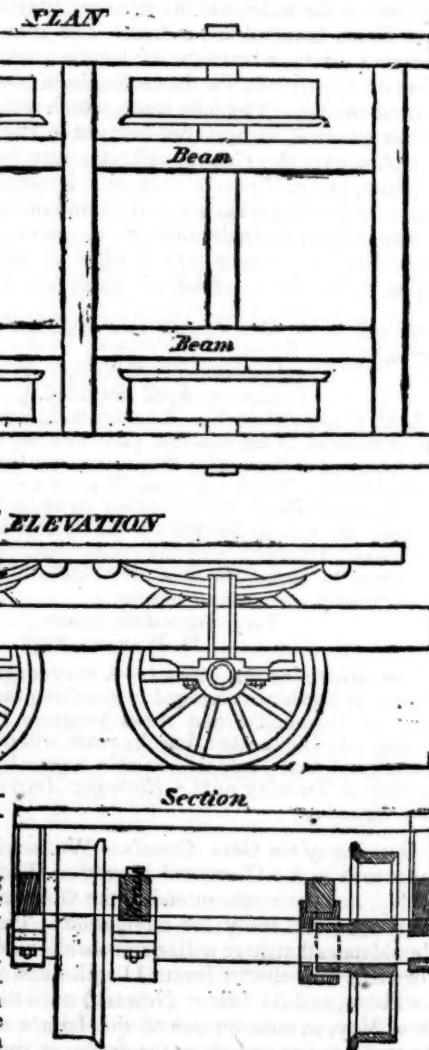
Wilmington, Del., Sept. 28, 1840.

The undersigned takes pleasure in attesting to the value of Mr. Joseph S. Kite's invention of the Safety Beam Axle and Hub for railroad cars. They have for some time been applied to passenger cars on this road, and experience has tested that they fully accomplish the object intended. Several instances of the fracture of axles have occurred, and in such the cars have uniformly run the whole distance with entire safety. Had not this invention been used, serious accidents must have occurred.

In short, we consider Mr. Kite's invention as completely successful in securing the safety of property and lives in railroad travelling, and should be used on all railroads in the country.

JOHN FRAZER, Agent,  
GEORGE CRAIG, Superintendent,

A model of the above improvement is to be seen at the New Jersey railroad and transportation office, No. 1 Hanover st., N. York.





**PATENT HAMMERED RAILROAD, SHIP and Boat Spikes.** The Albany Iron and Nail Works have always on hand, of their own manufacture, a large assortment of Railroad, Ship and Boat Spikes, from 2 to 12 inches in length, and of any form of head. From the excellence of the material always used in their manufacture, and their very general use for railroads and other purposes in this country, the manufacturers have no hesitation in warranting them fully equal to the best spikes in market, both as to quality and appearance. All orders addressed to the subscriber at the works, will be promptly executed. JOHN F. WINSLOW, Agent.

Albany Iron and Nail Works, Troy, N. Y.  
The above spikes may be had at factory prices, of Erastus Corning & Co., Albany; Hart & Merritt, New York; J. H. Whitney, do.; E. J. Eiting, Philadelphia; Wm. E. Coffin & Co., Boston. ja45

**PATENT RAILROAD, SHIP AND BOAT Spikes.** The Troy Iron and Nail Factory keeps constantly for sale a very extensive assortment of Wrought Spikes and Nails, from 3 to 10 inches, manufactured by the subscriber's Patent Machinery, which after five years' successful operation, and now almost universal use in the United States (as well as England, where the subscriber obtained a patent) are found superior to any ever offered in market.

Railroad companies may be supplied with Spikes having countersink heads suitable to holes in iron rails, to any amount and on short notice. Almost all the railroads now in progress in the United States are fastened with Spikes made at the above named factory—for which purpose they are found invaluable, as their adhesion is more than double any common spikes made by the hammer.

All orders directed to the Agent, Troy, N. York, will be punctually attended to.

HENRY BURDEN, Agent.  
Spikes are kept for sale, at Factory Prices, by I. & J. Townsend, Albany, and the principal Iron merchants in Albany and Troy; J. I. Brower, 222 Water St., New York; A. M. Jones, Philadelphia; T. Janviers, Baltimore; Degrand & Smith, Boston.

\*\*\* Railroad Companies would do well to forward their orders as early as practicable, as the subscriber is desirous of extending the manufacturing so as to keep pace with the daily increasing demand. ja45

## FRENCH AND BAIRD'S PATENT SPARK ARRESTER.

**TO THOSE INTERESTED IN** Railroads, Railroad Directors and Managers are respectfully invited to examine an improved SPARK ARRESTER, recently patented by the undersigned.

Our improved Spark Arresters have been extensively used during the last year on both passenger and freight engines, and have been brought to such a state of perfection that no annoyance from sparks or dust from the chimney of engines on which they are used is experienced.

These Arresters are constructed on an entirely different principle from any heretofore offered to the public.

The form is such that a rotary motion is imparted to the heated air, smoke and sparks passing through the chimney, and by the centrifugal force thus acquired by the sparks and dust they are separated from the smoke and steam, and thrown into an outer chamber of the chimney through openings near its top, from whence they fall by their own gravity to the bottom of this chamber; the smoke and steam passing off at the top of the chimney, through a capacious and unobstructed passage, thus arresting the sparks without impairing the power of the engine by diminishing the draught or activity of the fire in the furnace.

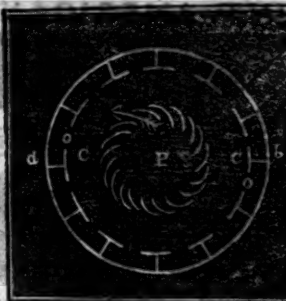
These chimneys and arresters are simple, durable and neat in appearance. They are now in use on the following roads, to the managers and other officers of which we are at liberty to refer those who may desire to purchase or obtain further information in regard to their merits:

E. A. Stevens, President Camden and Amboy Railroad Company; Richard Peters, Superintendent Georgia Railroad, Augusta, Ga.; G. A. Nicolls, Superintendent Philadelphia, Reading and Pottsville Railroad, Reading, Pa.; W. E. Morris, President Philadelphia, Germantown and Norristown Railroad Company, Philadelphia; E. B. Dudley, President W. and R. Railroad Company, Wilmington, N. C.; Col. James Gadsden, President S. C. and C. Railroad Company, Charleston, S. C.; W. C. Walker, Agent Vicksburgh and Jackson Railroad, Vicksburgh, Miss.; R. S. Van Rensselaer, Engineer and Sup't Hartford and New Haven Railroad; W. R. M'Kee, Sup't Lexington and Ohio Railroad, Lexington, Ky.; T. L. Smith, Sup't New Jersey Railroad Trans. Co.; J. Elliott, Sup't Motive Power Philadelphia and Wilmington Railroad, Wilmington, Del.; J. O. Sterns, Sup't Elizabethtown and Somerville Railroad; R. R. Cuyler, President Central Railroad Company, Savannah, Ga.; J. D. Gray, Sup't Macon Railroad, Macon, Ga.; J. H. Cleveland, Sup't Southern Railroad, Monroe, Mich.; M. F. Chittenden, Sup't M. P. Central Railroad, Detroit, Mich.; G. B. Fisk, President Long Island Railroad, Brooklyn.

Orders for these Chimneys and Arresters, addressed to the subscribers, care Messrs. Baldwin & Whitney, of this city or to Hinckley & Drury, Boston, will be promptly executed. FRENCH & BAIRD.

N. B.—The subscribers will dispose of single rights, or rights for one or more States, on reasonable terms. Philadelphia, Pa., April 6, 1844.

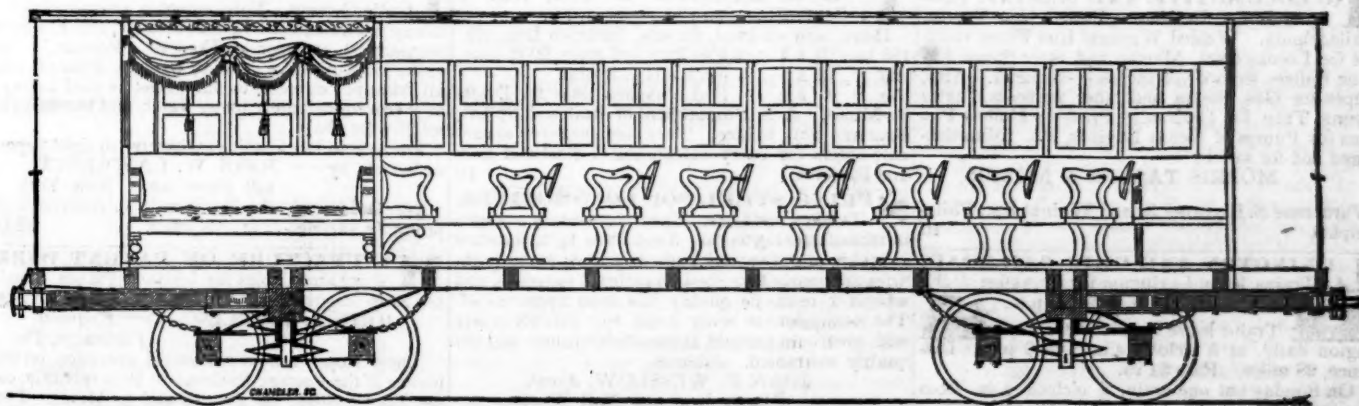
\*\*\* The letters in the figures refer to the article given in the Journal of June, 1844. ja45



**BENTLEY'S PATENT TUBULAR STEAM BOILER.** The above named Boiler is similar in principle to the Locomotive boilers in use on our Railroads. This particular method was invented by Charles W. Bentley, of Baltimore, Md., who has obtained a patent for the same from the Patent Office of the United States, under date of September 1st, 1843—and they are now already in successful operation in several of our larger Hotels and Public Institutions, Colleges, Alms Houses, Hospitals and Prisons, for cooking, washing, etc.; for Bath houses, Hatters, Silk, Cotton and Woollen Dyers, Morocco dressers, Soap boilers, Tallow chandlers, Pork butchers, Glue makers, Sugar refiners, Farmers, Distillers, Cotton and Woollen mills, Warming Buildings, and for Propelling Power, etc., etc.; and thus far have given the most entire satisfaction, may be had of D. K. MINOR, 23 Chambers st. New York.

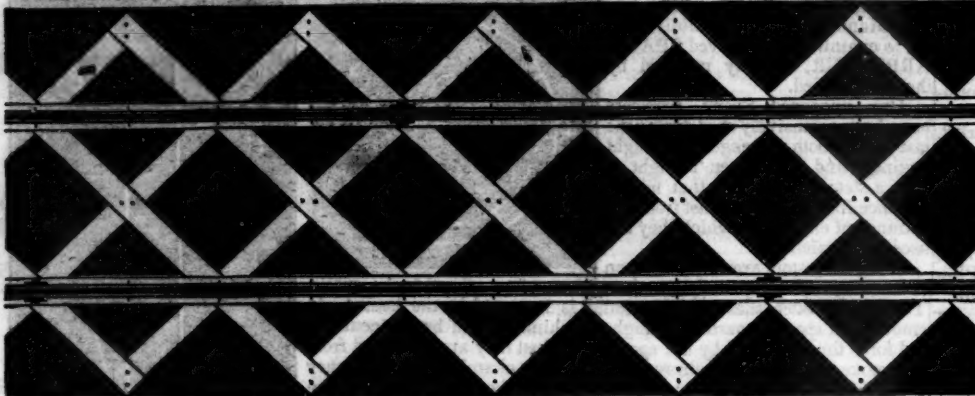
The article is complete in itself, occupies but little space, is perfectly portable, and requires no brick work, not even to stand upon. It is valuable not only in the saving of time and labor, but in the economy of fuel, as it has been ascertained by accurate measurement, that the saving in that article is fully two-thirds over other methods heretofore in use. They are now for the first time introduced into New York and Boston by the subscriber, who has the exclusive right for the New England states, New York and New Jersey, and are manufactured by CURTIS & RANDALL, Boston; and by FORCE, GREEN & CO. New York.

## DAVENPORT & BRIDGES' CAR WORKS.



DAVENPORT & BRIDGES CONTINUE TO MANUFACTURE TO ORDER, AT THEIR WORKS, IN CAMBRIDGEPORT, MASS. Passenger and Freight Cars of every description, and of the most improved pattern. They also furnish Snow Ploughs and Chilled Wheels of any pattern and size. Forged Axles, Springs, Boxes and Bolts for Cars at the lowest prices. All orders punctually executed and forwarded to any part of the country. Our Works are within fifteen minutes ride from State street, Boston—coaches pass every fifteen minutes.

## HERRON'S PATENT AMERICAN RAILWAY TRACK,



As seen stripped of the top ballasting

**HERRON'S IMPROVEMENTS IN RAILWAY SUPERSTRUCTURE** effect a large aggregate saving in the working expenses, and maintenance of railways, compared with the best tracks in use. This saving is effected—1st, Directly by the amount of the increased load that will be hauled by a locomotive, owing to the superior evenness of surface, of line and of joint. This gain alone may amount to 20 per cent. on the usual load of an engine.—2d, In consequence of the thorough combination, bracing, and large bearing surface of this track, it will be maintained in a better condition than any other track in use, at about one-third the expense.—3d, As action and reaction are equal, a corresponding saving of about two-thirds will be effected in the wear and tear of the engines and cars, by the even surface and elastic structure of the track.—4th, The great security to life, and less liability to accident or damage, should the engine or cars be thrown off the rails.—5th, The absence of jar and vibration, that shake down retaining walls, embankments and bridges.—6th, The great advantage of the high speed that may be safely attained, with ease of motion, reduction of noise, and consequently increased comfort to the traveller.—7th, The really permanent and perfect character of the Way, insuring regularity of transit. To which may be added the great increase of travel, that would be induced by the foregoing qualities to augment the revenue of the railroad.

The cost of the Patent track will depend on the quantity and cost of iron and other materials; but it will not exceed, even including the preservation of the timber, the average cost of the tracks on our principal railroads. Generally, the timber structure, fastenings and workmanship, exclusive of the cost of the iron rails, will be from \$2,300 to \$4,000 per mile. On this structure, rails of from 40 to 50 lbs. per yard, will be equal in effect to

60 and 70 lbs. rails laid in the usual way. The proprietors of a road, furnishing approved materials in the first instance, the undersigned will construct the track on his plan in the most perfect manner, with recent improvements, for one thousand dollars per mile. And he will farther contract to maintain said track for the period of ten years, furnishing such preserved timber and iron fastenings as may be required, and keeping said track in perfect adjustment, under any trade not exceeding 100,000 tons per annum, or its equivalent in passenger transportation, for Two hundred dollars per mile per annum.\* To insure the faithful performance of this contract, he will pledge one-fourth of the cost of construction, with the accruing interest thereon, regularly vested, until the completion of the contract. So that a company, by securing payment to the undersigned at the specified period, will have only \$750 per mile to pay for the workmanship on the track, without any charge being made for the use of the patent, the subsequent payments, for maintenance of way, and amount withheld, being made from the large margin of profits that will result from its use.

JAMES HERRON.

Civil Engineer and Patentee.

No. 277 South Tenth St., Philadelphia.

\* A general average of the repairs done on six of the most successful railroads in this country, for a period of from six to eight years' use has been found to exceed \$625 per mile per annum, exclusive of renewal of rails. But few roads in this country carry as much as 100,000 tons per annum. When a road exceeds that quantity, the repairs due to the additional tonnage, up to 200,000 tons, will be charged at one mill per ton; over the latter, and not exceeding 300,000 tons, nine-tenths of a mill, etc. Where there are two tracks to maintain, a large reduction upon those rates will be made.

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**W. R. CASEY, CIVIL ENGINEER**, NO. 23 Chambers street, New York, will make survey estimates of cost and reports for railways, canals, roads, docks, wharves, dams and bridges of every description. He will also act as agent for the sale of machinery, and of patent rights for improvements to public works.

**TO LOCOMOTIVE AND MARINE ENGINE BOILER BUILDERS.** Pascal Iron Works, Philadelphia. Welded Wrought Iron Flues, suitable for Locomotives, Marine and other Steam Engine Boilers, from 2 to 5 inches in diameter. Also, Pipes for Gas, Steam and other purposes; extra strong Tube for Hydraulic Presses; Hollow Pistons for Pumps of Steam Engines, etc. Manufactured and for sale by

MORRIS TASKER & MORRIS,

Warehouse S. E. corner 3d and Walnut Sts., Philadelphia.

**LEXINGTON AND OHIO RAILROAD.** Trains leave Lexington for Frankfort daily, at 5 o'clock a.m., and 2 p.m.

Trains leave Frankfort for Lexington daily, at 8 o'clock a.m. and 2 p.m. Distance, 26 miles. Fare \$1.25.

On Sunday but one train, 5 o'clock a.m. from Lexington, and 2 o'clock p.m. from Frankfort.

The winter arrangement (after 15th September to 15th March) is 6 o'clock a.m. from Lexington, and 9 a.m. from Frankfort, other hours as above.

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**CYRUS ALGER & CO.,** South Boston Iron Company.

**A. & G. RALSTON & CO., NO. 4** South Front St., Philadelphia, Pa.

Have now on hand, for sale, Railroad Iron, viz: 180 tons 2½ x ¼ inch Flat Punched Rails, 20 ft. long. 25 " 2½ x ¼ " Flange Iron Rails. 75 " 1 x ¼ " Flat Punched Bars for Drafts in Mines. A full assortment of Railroad Spikes, Boat and Ship Spikes. They are prepared to execute orders for every description of Railroad Iron and Fixtures.

**SPRING STEEL FOR LOCOMOTIVES,** Tenders and Cars. The Subscriber is engaged in manufacturing Spring Steel from 1½ to 6 inches in width, and of any thickness required: large quantities are yearly furnished for railroad purposes, and wherever used, its quality has been approved of. The establishment being large, can execute orders with great promptitude, at reasonable prices, and the quality warranted. Address

JOAN F. WINSLOW, Agent,  
Albany Iron and Nail Works,

**RAILROAD IRON.—THE MARYLAND AND NEW YORK IRON AND COAL COMPANY** are now prepared to make contracts for Rails of all kinds. Address the Subscriber, at Jennon's Run, Alleghany County, Maryland.  
WILLIAM YOUNG,

**THE AMERICAN RAILROAD JOURNAL** is the only periodical having a general circulation throughout the Union, in which all matters connected with public works can be brought to the notice of all persons in any way interested in these undertakings. Hence it offers peculiar advantages for advertising times of departure, rates of fare and freight, improvements in machinery, materials, as iron, timber, stone, cement, etc. It is also the best medium for advertising contracts, and placing the merits of new undertakings fairly before the public.

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TROY IRON AND NAIL FACTORY, H. Burden, Agent. (See Adv.)

ROGERS, KETCHUM AND GROSVENOR, Patterson, N. J. (See Adv.)

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NORRIS, BROTHERS, Philadelphia Pa. (See Adv.)

KITE'S Patent Safety Beam. (See Adv.)

FRENCH & BAIRD, Philadelphia, Pa. (See Adv.)

NEWCASTLE MANUFACTURING COMPANY, Newcastle, Del. (See Adv.)

ROSS WINANS, Baltimore, Md.

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**LAWRENCE'S ROSENDALE HYDRALULIC CEMENT.** This cement is warranted equal to any manufactured in this country, and has been pronounced superior to Francis' "Roman." Its value for Aqueducts, Locks, Bridges, Floods and all Masonry exposed to dampness, is well known, as it sets immediately under water, and increases in solidity for years.

For sale in lots to suit purchasers, in tight papered barrels, by JOHN W. LAWRENCE,

142 Front street, New York.

Orders for the above will be received and promptly attended to at this office. 32 ly

**MANUFACTURE OF PATENT WIRE**

Rope and Cables for Inclined Planes, Standing Ship Rigging, Mines, Cranes, Tillers etc., by JOHN A. ROEBLING, Civil Engineer,

Pittsburgh, Pa.

These Ropes are in successful operation on the planes of the Portage Railroad in Pennsylvania, on the Public Slips, on Ferries and in Mines. The first rope put upon Plane No. 3, Portage Railroad, has now run 4 seasons, and is still in good condition. 2v19 ly

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